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THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

July 1956

No. 1

DIET IN PREGNANCY

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To most people the term diet means restriction of food. When we go on a diet or are put on a diet, it usually means that we have eaten unwisely and too well and need to take off some extra pounds. When we enter upon the task of reducing which is set before us or which we set ourselves, we have as our aim and object the limitation of calories. Every popular booklet on diet and every lecture given the overweight patient by her physician contain a list of foods which absolutely must not be eaten. Such great emphasis is placed on strict avoidance of these particular foods that to eat even the least of them is attended with the fear of having committed a great misdemeanor.

In spite of this, all of us are familiar with the difficulty of getting our patients to reduce their weight. And perhaps the problem is the basic but necessary fact that in order to lose weight they must say no to certain foods.

To most people diet in pregnancy has the same connotation. Over and over again one sees a negative approach in pamphlets and textbooks, with their emphasis on limitation of certain foods—cakes, pies, pastry, bread, salt and so on. And yet we all find that the attempt to control food eaten during pregnancy may meet with the same resistance in our patients as does the imposition of diets to reduce weight.

In contrast to this negative approach, I believe that emphasis on diet in pregnancy should be positive. It should be on eating

the right kind of food. The main theme of diet instruction during pregnancy should not be restriction, but eating the kind of food which will give the pregnant woman a healthier and happier pregnancy and a healthier baby.

I recently read an excellent little pamphlet addressed to business executives which outlines ways in which they can make more effective use of their personnel. The methods described are contained in four words: Why, What, When and How. Most of us hardly like to think of the doctor as a business executive, but essentially he has to get people to do things, in the same way that an executive has to get his employees to put out their best efforts for his company. Methods which are successful in business may well apply to medicine, with modifications because of the different problems which arise in the management of patients.

I would like to discuss these four words in relation to diet in pregnancy. First, why is eating the right kind of food important?

Pre-eclampsia-eclampsia or toxemia of pregnancy is one of the most important complications of pregnancy. It seldom occurs in women who have exceptionally superior diets during pregnancy. Burke in Boston¹ and Tompkins in Philadelphia²

1. Burke, B. S.; Beal, V. A.; Kirkwood, S. B., and Stuart, H. C.: Nutrition Studies During Pregnancy, *Am. J. Obst. & Gyn.* 46: 38, 1943.

2. Tompkins, W. T.: The Clinical Significance of Nutritional Deficiencies in Pregnancy, *Bull. N. Y. Acad. Med.* 24: 376, 1948.

found the incidence of toxemia to be very low in women who had such excellent diets. A recent confirmation of these findings is given by Woodhill and her co-workers from Australia.³ They studied women attending the King George V Memorial Hospital for Mothers and Babies in Sydney in 1948-50. Toxemia occurred in 42.1% of women who had very poor diets in pregnancy, 21.2% of those who had poor diets, 9.7% of those with fair diets, 7.0% of those with good diets, and 5.6% of those with excellent diets. These differences were statistically significant. Similar results were obtained when diets before pregnancy, during the first part of pregnancy, and during the last part of pregnancy were compared.

Other complications of pregnancy have been found to occur more frequently in women who eat poor diets during pregnancy. In the Boston study it was found that 2/3 of the women eating good or excellent diets during pregnancy had perfectly normal pregnancies, whereas more than half of the women eating poor or very poor diets had complications. Again, Ebbs⁴ found that women who did not receive supplementary foods during pregnancy had four times as many serious complications during pregnancy.

Diet is also related to the time of birth, birth weight and health of the baby. Tompkins⁵ compared women who were helped to eat superior diets during pregnancy with women who did not receive this additional help. The women who did not receive the additional care and food had many more stillbirths and premature babies. Similar results have been obtained by investigators in other countries and elsewhere in the United States. The average birth weight of the babies born to the women with poor or very poor diets in the Australian study was 7 lbs., 0.30 oz. On the other hand the average birth weight of babies born to mothers with good or excellent diets during pregnancy was 7 lbs., 11.27 oz. Further-

more not only the size of the baby at birth but also its health during the first few months of life may be related to maternal diet. Ebbs found that the babies whose mothers had had poor diets during pregnancy caught cold four times as frequently and had bronchitis, pneumonia and anemia more than twice as often as the babies of the mothers who had been helped to eat healthful food during pregnancy. The importance of these findings is obvious when one considers the large number of babies who are lost as a result of prematurity, stillbirths and neonatal deaths. There is good evidence that dietary deficiency may be an underlying cause of prematurity and stillbirths, although in some instances a specific precipitating cause may be determined.

Other and perhaps less dramatic results have been shown to occur from eating a poor diet during pregnancy. For instance, in the Australian study, lactation, other things being equal, lasted longer in women with good and excellent diets as compared with those who had poor diets. Women who carefully follow good nutrition advice report that they feel much better during pregnancy. This is understandable since minor deficiencies of vitamins may cause such symptoms as anxiety, restlessness, insomnia, sensitivity to little noises and odors, weakness and headaches.

Next I want to discuss the word what in relation to diet during pregnancy. What standards should be used in recommending diet during pregnancy?

The most generally accepted standards for diet during pregnancy are those recommended by the Food and Nutrition Board of the National Research Council. These daily recommendations are as follows:

Protein	85 gm.
Calories	2500
Calcium	1.5 gm.
Iron	15 mg.
Vitamin A	6,000 I. U.
Thiamin	1.8 mg.
Riboflavin	2.5 mg.
Nicotinic Acid	18 mg.
Ascorbic Acid (Vitamin C)	100 mg.
Vitamin D	400-800 I. U.

Of course these are simply figures. They have to be translated into terms of actual food to be eaten. High intake of a few nutrients, with low intake of others, does not build health during pregnancy. Studies which concentrate on diet item by item

3. Woodhill, J. M.; Vandenberg, A. S.; Burke, B. S., and Stare, F. J.: Nutrition Studies of Pregnant Australian Women, *Am. J. Obst. & Gyn.* 70: 987, 1955.

4. Tompkins, W. T.: Significance of Nutritional Deficiency in Pregnancy; Preliminary Report, *J. Internat. Coll. Surg.* 4: 147, 1941.

5. Ebbs, J. H.; Tisdall, F. F., and Scott, W. A.: The Influence of Prenatal Diet on the Mother and Child, *J. Nutrition* 22: 515, 1941.

tend to show little or no relationship between food eaten and complications of pregnancy and prematurity. It is the sum of food eaten—everything taken together in superior amounts—which appears to improve the health of mothers and babies.

However, there is one convenient yardstick for measuring and recommending diet, and that is the amount of protein. Protein should mostly come from animal sources, and that means meat, fish or poultry, eggs, milk and cheese. A woman who consistently takes a diet high in protein will usually obtain enough of the other elements, with certain exceptions. If she were to eat a diet entirely composed of protein and including a wide variety of fish, organ meats, milk, cheese and eggs, she would get an adequate amount of most of the other items—except vitamin C and possibly vitamin D. If calories are used as the yardstick, then 2500 calories can easily be obtained from—to take somewhat ridiculous examples—8 pieces of pie, 2½ quarts of ice cream or 30 Coca Colas. However, the amount of the other necessary food elements obtained would be very small. Thus, if one is to use any one particular food element to measure adequacy of diet, *protein* is much more suitable than *calories*.

The problems of when and how in relation to diet in pregnancy are closely related. All of us who handle obstetrical patients are frequently dismayed at their inability or lack of desire to carry out diet instructions during pregnancy. In this imperfect world it is impossible to expect to bat 1000. There are many factors other than the advice of a trusted physician which influence a woman's desire to eat well during pregnancy. Such things as her family eating habits, developed from infancy, socioeconomic factors, or desire for the pregnancy may affect her wish to improve her eating habits during pregnancy. However, we should not throw up our hands and say we just cannot do any better. A physician has a real responsibility for education in the matter of diet: it is not a matter solely of what happens to the woman during the particular pregnancy but it may affect the future health of the whole growing family. Any changes towards good dietary habits which can be made during pregnancy may result in less sickness and a happier family life for many years to come. This is one of

the real challenges in obstetrics today—a real opportunity to prevent rather than to treat already established disease. To accomplish this and raise our batting average a little, there are several things that can be done. These are:

1. Dietary advice should start early in pregnancy—with the first prenatal visit.
2. It should be continued throughout the pregnancy.
3. It should be specific.
4. It should emphasize the positive aspect of eating the right kind of food rather than the negative one of restriction.
5. It should always emphasize the importance of protein rather than of calorie intake.
6. It should take into account the provision of supplemental nutrients.
7. It should be adaptable to special problems, especially those of nausea and vomiting of early pregnancy, obesity and fluid retention.

The first prenatal visit is not too soon to start discussion of diet. Patients can frequently sense what their doctors feel to be important when we do not realize it ourselves. Perhaps that explains why advice to patients to stop smoking is sometimes difficult to get across. At any rate patients will pay more heed to matters about which they feel that their doctor is concerned. If no mention of diet is made when the pregnant patient first sees her physician, and the subject is mentioned maybe once or twice briefly later on, she will soon get the idea that her doctor does not regard it as important and she will be less likely to follow any advice that he may give. In addition, if the subject is mentioned once at the first visit and then dropped for the remainder of the pregnancy, the patient will also lose interest in the subject. Reinforcement of stimuli is an essential psychological principle.

Dietary advice should be specific. It is not enough to hand a patient a diet sheet or tell her to read the section on diet in such books as the Government publication on Prenatal Care or Dr. Eastman's "Expectant Motherhood." Some women will do this and many will not. Further, only a small percentage of those who do read the information will act on it. It is important to give the patient specific information. Obviously it is not practical to write out in long hand

for each patient a list of sample menus for a week. Most of us would not have the remotest idea of how to do that anyway. But as you explain to the patient the importance of diet it is possible to write down the average protein values of the major protein-containing foods. For example, an average helping of meat—3 to 4 oz.—contains 20 to 25 gm.; 1 quart of milk contains 33 gm., 1 egg 6 gm., and one oz. of cheese 7 gm. Added to this may be a simple written reminder to take 2 helpings daily of vitamin C foods such as oranges, grapefruit, etc., 2 helpings of leafy green or yellow vegetables daily, and to use whole wheat bread for its vitamin B content rather than white or enriched bread. If such a simple list has been given, then the use of a mimeographed sheet or booklet may be of added value.

An essential part of emphasizing the positive aspects of diet rather than the negative is continued insistence on the patient taking enough protein. A convenient way of doing this is at certain times during pregnancy to ask the patient to recapitulate briefly the food she has eaten during the 24 hours prior to her visit to the office. While she describes what she has been eating, a rough estimate of the number of grams of protein in her daily diet may be put down on a scratch pad and then her success or failure explained. Other aspects of her diet may also be noted. Incidentally, even if her diet is very poor, wholesale condemnation of her habits will do little good. There is frequently some small item on which she has done well, and praise mixed with suggestions as to improvement will do much to encourage her to do better.

As far as supplemental nutrients are concerned, the question of prescribing additional vitamins arises. If one could be sure that a patient was taking an adequate and well balanced diet, additional food elements would be unnecessary with the possible exception of vitamin D. I tend to be skeptical about this matter and will usually prescribe one of the many available vitamin and mineral compounds which contain calcium, iron and, particularly, the vitamin B complex. The only trouble about doing this is that patients may tend to regard the rest of their diet as being unimportant provided that they take the required pill or pills every day. It is important to emphasize in this connection that pills cannot substitute for

but only supplement the remainder of the diet.

Minor problems of pregnancy frequently concern diet. For instance, nausea and vomiting of pregnancy can frequently be helped by eating early in the morning before arising, or by taking frequent small meals rather than three large ones. Fluid retention is one of the great problems of pregnancy and rightly so because of the danger of impending toxemia. Salt restriction is an important part of any pregnancy diet. It should be emphasized at first and reiterated if weight gain tends to be sudden or excessive. Total weight gain during pregnancy is a subject about which many obstetricians are greatly concerned. If a woman is eating a diet high in protein, with relatively few calories obtained from carbohydrates and starches, she will usually not gain excessive weight. My own personal preference is not to emphasize weight control too strongly to the patient at first, but merely state that the average pregnant patient who is not overweight at the beginning of her pregnancy should gain about 25 pounds, but that that gain should be evenly distributed and should not occur in sudden spurts. If weight gain does become a problem during pregnancy, and calorie intake appears excessive, then restriction of calorie-containing foods must be urged. These recommendations can be easily combined with a diet sheet in which the main categories of foods are listed, and under each listing a paragraph is included beginning with the words "If you must watch your weight" and continuing with the foods in that category which must be reduced or eliminated.

You will say that to give such complete advice on diet during pregnancy takes time. And so it does. But it is time well spent, and it need not always be spent by the physician. In many hospital clinics a dietitian is regularly used in the obstetrical clinic to advise pregnant patients in groups or singly with good effect. In the private office the nurse can easily be taught to take over the explanation of diet during pregnancy, with occasional brief reinforcement by the physician.

SUMMARY

Patients frequently obey instructions better when they understand the reasons behind them. The principles of why, what, when and how apply with great force to dietary advice in pregnancy. A patient

should eat the right kind of food during pregnancy because she will have fewer complications, will feel better, and will have a healthier baby. She should concentrate on eating a diet high in protein rather than worrying about limitation of calories. She should carry a protein counter rather

than a calorie counter. She should remember that prenatal diet is not something to be followed once and then promptly forgotten, but should be something to remember every week and every day. And lastly, she must be given simple and specific dietary information.

DIAGNOSIS: POISON

UNSUSPECTED POISONING A DIAGNOSTIC PITFALL

HENRY M. GEWIN, M. D.

Mobile, Alabama

In a certain great city there were a large number of sudden deaths, all with the same symptoms which threw society into a panic. The mystery of these deaths was finally solved when a slave announced that some 20 matrons had formed a plot to rid themselves, by means of poisoned beverages, of those who displeased them or those whose property they wished to inherit. These matrons were apprehended, but offered as their defense that they were only brewing medicines. Upon being forced to test their own remedies upon themselves, they all perished.

This series of events occurred in Rome in the year 331 B. C. according to the historian Livy and represents one of the earliest recorded instances of wholesale poisoning. For the next 2000 years history recorded many instances of wholesale and individual poisoning. Nero, the Borgias, and others have taken their place among those who did not hesitate to use the "cup of death" for their own personal gain. Our present day custom of touching glasses is but a symbolic remnant handed down from those times of widespread poisoning when each man spilled part of the contents of his glass into that of his companion as a proof of friendship.

Dr. Walter Meek¹ has reviewed the history of poisoning in his delightful essay, "The Gentle Art of Poisoning," which he concludes with these statements: "During the 18th century poisoning lost most of its glamor and romance and became more and more recognized as cowardly murder. With

a discovery of a chemical test for arsenic by Marsh in 1846, the old days of the art of poisoning were dead never to be revived."

It is the purpose of this paper to point out that, although chemical tests are now available for the detection of practically all poisons, the art of poisoning is still being practiced. Unfortunately, the practitioners of this art are all too often unsuspected and left free to continue their work. The following cases show how poisoning may masquerade as natural disease. They also show how often the physician is willing to sign a death certificate assigning his patient's demise to natural causes without requiring a criminal investigation or toxicologic studies in unexplained cases.

A 19 year old male was admitted to a Mobile hospital in a state of confusion and delirium. Several weeks previously he had had an acute sore throat associated with some stiffness of his neck, but cerebrospinal fluid examination at that time revealed negative findings. Since that time he had suffered with persistent low grade fever and sore throat, and a few days prior to admission had developed swelling of the hands and face. Physical examination revealed an injected pharynx, moderate stiffness of the neck, delirium, and confusion. Pertinent laboratory information revealed a 3 plus albuminuria with many red cells, a few white cells and granular casts. Spinal fluid examination revealed protein of 60 mgm. %, and blood NPN was 48 mgm. %. A number of other laboratory studies were within normal limits. His physician made a tentative diagnosis of pyelonephritis. A consultant's note stated: "This is a 19 year old boy with a perplexing history and clinical picture. The history related by his wife

Read before the Association in annual session, Birmingham, April 20, 1956.

1. Meek, W. J.: The Gentle Art of Poisoning, J. A. M. A. 158: 335 (May 28) 1955.

of mental changes, fever, headache and delirium is strongly suggestive of a tuberculous meningitis. Pyelonephritis with uremia could account for the picture." There was no response to antibiotics, intravenous fluids and general supportive measures, and the exact diagnosis still remained in doubt until the patient's parents suggested the possibility of poisoning and stated that they suspected the patient's wife and her mother. It was then learned that the patient had recently taken out a \$6,000 insurance policy with his wife as beneficiary and had first become sick on a picnic shortly thereafter. That same evening the physician in charge of the case surprised the patient's wife and her mother while they were attempting to force some tablets down the throat of this semiconscious, delirious patient. Toxicologic studies of the urine were requested and revealed large quantities of mercury. Following British Antilewisite therapy, together with constant guarding of the patient to protect him from further poisoning attempts, his recovery was uneventful and complete. The wife, however, hurriedly left the state and was never prosecuted by the authorities.

Another case is that of a 44 year old female who, four weeks before I first saw her, had had a hysterectomy for fibroid tumors. She had gone home six days post-operatively, but after going home had become irrational and over-talkative and was returned to the hospital for a five day period during which time her mental status quickly cleared and she was discharged. Upon returning home she again became confused and delirious and was returned to the hospital where, because of progressive disorientation and hyperactivity, she was transferred to the mental unit.

Examination revealed a disoriented woman who exhibited gross tremors and many purposeless movements of choreiform nature, with occasional forced grasping being evident; otherwise general examination was not remarkable. Significant laboratory data consisted of slight albuminuria and an NPN of 102 mgm. %. Daily fever of 103° and moderate diarrhea occurred during the first few days of hospitalization. Because of the perplexing nature of this woman's illness, because of the fact that she had gotten worse upon returning home previously and had gotten better in the hospital without specific treatment, and because I had

just heard of the previous case from the physician in charge, I half jokingly suggested to the psychiatrist who had called me in consultation that perhaps this woman was being poisoned. Urine was collected for toxicologic studies, and the report revealed the presence of mercury in large amounts. Moreover, the toxicologist recognized the name of the patient and stated that she was at that time under investigation because of the death of her husband who had died suddenly four years previously after a severe attack of vomiting. An autopsy had been performed shortly after his death by the Mobile City Hospital pathologist, and this was stated to show a definite hemorrhage of the right cerebral hemisphere, but the autopsy had been confined to an examination of the head only.

Four years later a detective of the Birmingham Police Department called the Mobile authorities and stated that a man who was at the time being questioned in connection with a murder in Birmingham had also confessed to poisoning our patient's husband on March 7, 1947, in Mobile, Alabama, with colored pills furnished by the victim's wife. This man questioned in Birmingham also stated that he received \$300.00 from the victim's wife for this poisoning. Upon receiving this information the County Solicitor issued an order to the Sheriff and the State toxicologist to exhume and investigate the death of our patient's husband. Accordingly his body was exhumed May 22, 1951, and a report from the office of the toxicologist indicated the presence of large quantities of mercury in the organs in the exhumed body. We, therefore, have a confession to the murder by poisoning of a man whose body upon exhumation showed the presence of mercury in his organs, the confessor stating that he had been hired by the victim's wife to accomplish this murder. Four years later the wife was admitted to the hospital with a mysterious illness which, upon toxicologic studies, was revealed as mercury poisoning. Following treatment with British Antilewisite and supportive measures, she recovered completely, but so far as I can determine no legal action has ever been taken in the case. I still do not know whether she administered the mercury to herself because she was at the time being investigated for participating in the death of her husband or whether some other member of her

family may have administered mercury to her. In any event, the confessed murderer was convicted of the crime in Birmingham, so he was not returned to Mobile for trial.

Another case is that of a 37 year old female who was admitted to the Mobile City Hospital in November of 1954 with a history of having become ill three days previously complaining of pain in the abdomen, right flank and legs. The following day she became confused, disoriented and began to vomit frequently. In the hospital emergency room she was noted to have loose, frequent stools. The patient was known to have been a heavy drinker, but there was no information as to whether she had consumed any type of alcoholic beverages in the previous two weeks. Upon physical examination the blood pressure was not obtainable, the pulse was rapid and thready, and the patient was disoriented and confused. There was noted to be generalized abdominal distention, marked generalized tenderness, hypoactive bowel sounds, and marked dehydration and a moderate nuchal rigidity. Temperature was 103 degrees. During the 48 hours until death the patient was seen by approximately six different physicians and some ten diagnoses were proposed or considered seriously. Among these were bacterial enteritis with septicemia, meningitis, cerebral vascular accident, perforated ulcer, ruptured ectopic pregnancy, hemorrhagic pancreatitis, myocardial infarction, and ruptured appendix with pylephlebitis and peritonitis. Following the administration of blood the patient's vascular competency was temporarily restored, blood pressure returned to normal levels and there was definite improvement for approximately 24 hours. At the end of 24 hours bilateral parotitis developed and there was rapid deterioration and death.

Autopsy revealed edema of both lungs. Scattered liver hemorrhages were noted. The kidneys were swollen and hemorrhagic. Necrosis of the lining of the stomach and esophagus was present. There was extensive focal necrosis of the pancreas on microscopic section. Toxicologic studies revealed the presence of arsenic and copper in the liver and kidneys, and studies of the intestinal contents revealed the presence of copper and arsenic in large amounts. Quantities recovered were stated to be in excess of a fatal dose of arsenic. The exact source of this patient's poisoning is not cer-

tain although it is postulated to have been the result of poisoned boot-leg whiskey since she is known to have been an alcoholic, and since it is well known that boot-leggers at times poison certain batches of their product as a lesson to those who would steal whiskey from them. The important lesson to be learned from this case, however, is that poisoning was not even considered in the differential diagnosis even though a number of different physicians examined the patient and carefully considered the differential diagnostic problem.

Another series of cases has recently received considerable publicity, and review of the medical aspects of these cases is interesting and instructive. Since only the records of those who expired in Mobile were available for study, all of the seven confessed poisonings will not be reviewed. One, however, is that of the 11 year old daughter who was admitted to a Mobile hospital in 1943 with severe nausea, vomiting and diarrhea and circulatory collapse. Despite intravenous fluids she expired 10 hours after admission. The cause of death was listed by the physician as gastro-intestinal infection (food poisoning) with dehydration and starvation. The mother later confessed that she poisoned her daughter with arsenic in Montgomery and brought her to Mobile to die. Eight months later this same poisoner disposed of her mother who died in another Mobile hospital, cause of death on this occasion being listed as acute diarrhea probably due to influenzal infection.

Having successfully disposed of 6 victims without arousing suspicion among the medical profession, our poisoner next attempted to poison her present husband who also is the son of a former husband and victim. The medical aspects of this case are quite instructive. According to his physician, this young man was, on three occasions, admitted to a Mobile hospital with a history of a recurrent stomach disorder characterized by recurrent episodes of vomiting as well as severe abdominal cramps. X-ray studies revealed a hiatus hernia and considerable esophagitis, duodenitis, and gastritis with superficial ulceration of the duodenal bulb. The patient then developed marked muscle weakness and a beginning wrist and foot drop, along with considerable pains and paresthesias in his extremities. A history was obtained of a similar illness in the patient's father leading to the father's death,

and some type of familial neurologic disorder was seriously considered. It was not realized, however, that the patient's father had also been married to the same wife, and since both the original physician and his consultant had initially assumed that the patient was the son rather than the husband of the woman in this case and had spoken with her about her "son" only to be rather forcefully corrected, embarrassment precluded any further questioning about the familial background. However, because of the high spinal fluid proteins (101 mgm. %) and the neurologic picture, British Antilewisite was empirically administered since it had previously been reported to be of benefit in neuritis of the Guillain-Barré type, as well as other non-specific or unknown forms of neuritis. Undoubtedly, the decision to begin administration of this antidote for arsenic played a significant role in saving the patient's life. He was then transferred to the Veterans Hospital in Biloxi where the physicians suspected the true nature of his illness, confirmed it with toxicologic examination of the hair and nails, and reported their findings to the Alabama authorities, who then apprehended the poisoner and secured a confession. In summary, I would like to point out that there were six death certificates signed by physicians who never suspected the true nature of the cause of their patients' deaths. Surviving members of this woman's family were also completely stunned by her confession, indicating how cool and natural may appear the behavior of a poisoner whose seeming devotion to her victims in their last illness is often quite touching.

Briefly, I should like to mention another pair of cases of homicidal poisoning. A 50 year old male was carried to a hospital in Atmore for treatment on August 27, 1950. The patient was critically ill with abdominal pain and nausea and vomiting but no diarrhea. Further questioning revealed that he had had several previous episodes of nausea and vomiting and these usually were on Thursdays and Sundays. Physical findings were inadequate to explain the severity of the patient's vomiting and abdominal pain, and when he died early on the following morning, the physician very wisely requested a toxicologic examination despite the protest of the wife. Large amounts of arsenic were found to be present. As a result there was issued an order of exhumation

of the body of the patient's brother who had also been married to the same woman and who had died 15 months previously after a similar illness with vomiting spells and abdominal pain. This body was exhumed and toxicologic studies again revealed the cause of death was arsenic. The wife of the two brothers was tried and sentenced to life imprisonment and is now serving her term in the State prison. Again, however, the first murder was completely unsuspected and, but for an alert physician who dared to face the ire of the wife and insist upon a toxicologic examination, the murderess might still be at large.

These cases show what baffling diagnostic problems can be presented by the victims of homicidal poisoning. In these few instances the diagnostic problems have now been solved, but how many times has this same cause of illness and death been overlooked. It is quite understandable that a physician, who devotes his life's work to the relief of suffering and healing of the sick, should find it difficult to conceive of any one deliberately producing suffering and death. Yet realism demands that the physician consider this possibility in all puzzling cases.

Arterial Surgery Relieves Adolescent Hypertension—Hypertension in a 15-year-old boy has been relieved by an unusual type of arterial surgery, according to four Cleveland physicians.

Diseased sections of the two arteries leading into the kidneys were replaced by arterial grafts from other persons. This is believed to be the first case in which both arteries were repaired by grafting, the doctors said in the June 2 Journal of the American Medical Association.

The boy's high blood pressure was caused by the diseased condition of the renal arteries. The walls of the arteries had become thickened, obstructing the passage of blood.

The operation was performed in two parts, at two-week intervals, with one artery repaired each time. The boy's condition began to improve immediately and his blood pressure is now normal, Drs. Eugene F. Poustasse, Alfred W. Humphries, Lawrence J. McCormack and Arthur C. Corcoran said.

The origin of the kidney artery obstruction "must remain speculative," they said, adding that it may represent a youthful form of arteriosclerosis, although no other vessels were affected. The condition may be a basic flaw in the development of the arteries, or it may be a hitherto unrecognized type of hypertension in adolescence.

Two similar cases, which were fatal, led to recognition of the condition in the third patient and demonstrated the need for surgical correction of the renal arterial defect. The surgery was attempted and was successful.

THE CLINICAL USE OF RESERPINE IN MENTAL CASES

CLYDE BROOKS, M. D.

Tuscaloosa, Alabama

Very recently a new method for treating the mentally ill has been discovered. It is the biochemical or biological method, whereby the patient is given a chemical agent which, in some way, improves the patient's feelings, behavior, and thinking; and came about through the discovery that the very ancient medicinal shrub *rauwolfia* or Indian snakeroot contained a brown muddy residue which, when purified, yielded shining white crystals identified as the alkaloid reserpine, the first chemical agent effective in the treatment of the mentally ill. So now we are in a position to hope to add something to our already very useful and effective methods of treating mentally ill patients.

The most direct and effective plan for accomplishing this is to convince the general practitioner and the internist that he can and should accept his proper share of responsibility for mentally ill patients, for there are not enough able, accomplished psychiatrists to take adequate care of the present number of such cases. But with reserpine available, doctors can successfully look after many mental patients, especially those taken in their incipency and treated in their homes or in general hospitals, without ever referring them to a psychiatrist, or having them committed to a mental institution. This plan can be put into effect at once, with no additional mental clinics or other new organizations or facilities.

My impression is that reserpine is a safe and effective agent which can be successfully used at this time to help alleviate the sufferings, and, possibly, reduce the number of mental patients. I have been using it for more than two years, with generally satisfactory results, including several hundred mentally ill patients such as are found in a large mental hospital.

And further to hasten the ushering in of the new biochemical era in psychiatry, we now have other agents which are more or less effective in the treatment of the mentally ill: *Thorazine*, chlorpromazine,

promazine, tyzine,* and several others, all of which are indications that we are now actually in the biochemical era of psychiatry. No doubt we shall see an increase in the number of agents which are useful in the treatment of mental cases. Some of them may surpass the ones we now have.

The word "doctor" or "doctors" in the discussion below will refer to the general practitioner, the family doctor, and the internist.

The doctor's responsibility and opportunity in the improvement and protection of mental health is a rapidly growing and expanding division of modern medicine. We are quite accustomed to hear of doctors detecting early cancer and also being alert to detect early tuberculosis, poliomyelitis, diphtheria, typhoid fever, and many other maladies which are a threat to the physical health of their patients. But now we are going to be hearing of the doctors detecting early cases of mental disease, and furthermore to be hearing of the doctors successfully treating many of these patients. This is possible by the doctors getting adequate knowledge and experience in diagnosing and managing mental cases in a way which will be safe and effective.

In the first place, all medical schools should give their students a good course in mental diseases, which will enable them, when they graduate, to take care of a large number of mental patients who come for treatment. The doctor should study, and read, and attend clinics until he gains a satisfactory training for accepting mental cases. Of course, the doctor will treat all patients he can handle, and refer the more difficult and resistant ones to the psychiatrist.

Compelling reasons for this kind of plan are the great number of mental patients and the utterly inadequate number of capable psychiatrists. Six per cent of the population is suffering from mental illness, or other serious personality disturbances. This means that there are about 9 million such cases. And about half the patients who come to the doctor's office are, in some de-

Read before the Association in annual session, Birmingham, April 20, 1956.

* For this study, Serpasil was supplied by Ciba Pharmaceutical Products, Inc.

*Sparine—Wyeth Laboratories.

gree, suffering from maladies connected with mental illness or personality disturbance.

Physicians should accept their responsibility and grasp their opportunity to do everything possible to help solve this, our most urgent health problem: mental illness. One difficulty is that the doctor, with a waiting room full of patients, all anxious to see him, finds it difficult to stop and sit down for an hour with a mental case, to interview the patient, and to make some progress in treating the patient with psychotherapy. The doctor might be inclined to take care of the other patients first, and to give the time left to mental patients. The very busy doctor will find it difficult to find the time to take care of many mental cases. It might cut down his income. But laboratory methods, with the help of new miracle drugs and antibiotics, have given some short-cut procedures which save much time. So the doctor now should be able to find more time to treat the mind as well as the body of his patients. And the doctor would hesitate to install electrical equipment, oxygen apparatus, and to set up suitable rooms for giving electroconvulsive treatments, and recovery rooms, all of which might interfere with the regular routine of his office practice. Probably electroconvulsive treatments are better done in a hospital. So there are difficulties when the doctor tries to use the older methods in his office in treating his mental cases.

However, he will have less trouble in handling his mental patients by the new biological method: giving them reserpine, or chlorpromazine, or promazine. He can give these so-called wonder drugs by intramuscular injection to the beginners, and to those patients who need more urgent treatment; or by mouth to those who can be treated more deliberately. In this way the mental cases will fit in with no difficulty in the doctor's regular office routine, along with all other types of patients.

Another important phase of the mentally ill patient's care is the time when she is furloughed home on a trial visit, or is discharged from the mental hospital. It is here that the doctor can facilitate and accelerate the patient's adjustment outside the hospital. The doctor should learn all about the patient's history, before and dur-

ing her stay in the hospital. The doctor should continue the administration of reserpine and the use of such psychotherapy as can be done; as well as the care of the patient's physical welfare.

Most mental cases who are over-active, disturbed, upset, noisy, combative, hostile, destructive, untidy, and uncooperative will improve when given adequate doses of reserpine for a sufficient time. They become quieter, tranquil, happy, friendly and polite. They cooperate better and they enter into ward activities. They usually have a better appetite, eat more, and gain in weight. They sleep better. The whole atmosphere is changed when all patients on a disturbed, noisy, upset ward are treated at the same time with reserpine. The entire ward becomes relatively quiet, serene, and orderly. And the patients, when well under the influence of reserpine, become much more amenable to psychotherapy. They listen to the therapist; then tell him their troubles, and they are helped toward better contact with reality.

Some patients require an extended period of treatment, with intramuscular and oral administration of reserpine. This is gradually reduced as the patient improves, until the dosage is down to the maintenance level. This maintenance treatment may be continued for several months, or a year, or more, depending on the results obtained. Some patients require maintenance treatment for a long time.

Other patients respond more promptly, and are quite able to go home in a few months, after which a few more months of maintenance treatment will more or less completely relieve the patient of her abnormal symptoms. We then say: "She is in remission." Of course, we hope the remission will be permanent.

Rarely, patients will be encountered who have had long, stormy histories, including many shock treatments, who have been in the hospital for six or ten years, or longer, who during that period have been secluded most of the time. These patients now are denudative, untidy, destructive, combative, hostile, noisy, and they show no evidence of mental functioning. Such cases have a bad prognosis. They are not expected to show any improvement. But certain ones of this group, after a prolonged course of treatment with adequate doses of reserpine, fi-

nally begin to emerge from the darkness, and ultimately they come out into the sunlight of mental fitness. And again we say: "She is in remission." And in some of our cases the remission has continued for more than a year, with no need for medication, and with no relapses.

At the suggestion of Dr. J. S. Tarwater we have been carrying on an intensive program on some of our wards. The regimen includes medication with reserpine, with various activities: bathing and grooming, beauty parlor work, games, dancing, outdoor games, walks on the lawn, bus rides, occupational therapy, singing, and religious services. This regimen is yielding very satisfactory general improvement of most of the patients on the wards. This is apparently a very promising plan for the treatment of mental patients.

The dosage of reserpine should be individualized. As a general rule, disturbed, noisy, upset patients, who require rather prompt treatment, can be started on 5 to 10 mg. of reserpine a day given intramuscularly for 5 to 15 days, or until the patient is somewhat tranquilized, or shows some side effects, such as slow pulse (50 to 60 per minute), low blood pressure (80 to 90 mm. systolic pressure), stuffiness of the nose, swelling of the face, poker face with trembling of the hands (Parkinsonism), and inclination to lie in bed. At this stage, if the side effects are too troublesome, the reserpine can be discontinued temporarily. After a few days, when side effects have subsided, the treatment can be resumed by giving the reserpine by mouth, usually 4 to 5 mg. a day. This may be continued for three or four months, or until the patient has shown satisfactory improvement. After this the dose may be reduced to maintenance level, one to two mg. per day. But some patients get along on a fraction of a milligram per day.

In patients who are mildly disturbed or upset, reserpine may be given orally from 1 to 5 mg. per day, or until satisfactory response is seen. However some patients will require much larger doses. And in some mental hospitals enormous doses have been used, which the patients tolerated well, and with good results. In our wards we have seldom exceeded 25 to 30 mg. of reserpine by intramuscular injection per day. There were no serious nor dangerous side effects in these cases.

In summary, of course it would be ideal for all mental patients to be treated by a psychiatrist, just as it would be ideal to have all heart cases treated by a cardiologist. But there are not enough psychiatrists nor cardiologists to do the job. So we must rely on the internist and the general practitioner to do what he can to substitute for the specialist when his services are needed. And we are fortunate to be able to employ very effectively psychotherapy and psychoanalysis, and convulsive therapy. These are useful and effective. But the new wonder drugs, reserpine et al., are a distinct and valuable addition which should make the treatment of mental cases easier and more effective.

Increase in Scurvy Caused by Baby Feeding Changes—The abandonment of "pot liquor" and "milk from the family cow" as traditional baby foods—and neglect of daily orange juice—have been blamed for an increase in scurvy among infants in Tennessee.

Dr. Calvin Woodruff said in the June 2 Journal of the American Medical Association that the number of cases seen at Vanderbilt University Hospital, Nashville, had jumped from eight in 1926-34 to 45 in 1950-54. From 1926 to 1954 there was a total of 103 cases.

Scurvy, caused by a deficiency of ascorbic acid, occurs most frequently between the ages of seven and 11 months. It can produce bone deformities, and its symptoms sometimes are like those of poliomyelitis.

Ascorbic acid can be obtained from several sources, including orange juice (probably the best source), fresh unpasteurized milk, tomato juice, and even "pot liquor," the water in which green vegetables and fat meat have been boiled.

The abandonment of these old feeding customs and the sterilization of milk—without substituting anything for these sources of ascorbic acid—have resulted in the increase of scurvy.

He pointed out, however, that pasteurization of milk is desirable despite the resulting loss of ascorbic acid. Addition of ascorbic acid to baby formulas is a good practice, but the philosophy behind this should not be carried to the point where all nutrients needed by the infant are added to the milk formula.

"The most important attribute of a normal complete diet for children is a variety of food," he said, "and it is the responsibility of parents to help infants develop wide taste acceptance as early in life as possible. The importance of an antiscorbutic in the diet is a first lesson. Consequently it is unfortunate to have the point of this lesson lost in the maze of fortified formulas and multivitamin preparations with which we are confronted every day."

While children who cannot—or refuse to—drink orange juice should be given a substitute, for other children orange juice or some other natural ascorbic acid source is best, he said.

THE JOURNAL

of the

Medical Association of the State of Alabama

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

Office of Publication

501 Dexter Avenue Montgomery, Ala.

Subscription Price \$3.00 Per Year

July 1956

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INSURANCE PROGRAM

The Association's insurance program is underway. Liberty Mutual Insurance Company is the underwriter for both the accident and health and the professional liability plans. Thus far, not enough members have signed up to put either plan into effect, but it is hoped that before long this picture will change. Each member has received a pamphlet on both proposed plans. If you have not read these, you should. Send any questions or your applications to The Medical Association of the State of Alabama, c/o Liberty Mutual Insurance Company, P. O. Box 287, Mobile, Alabama.

GULF COAST CLINICAL SOCIETY

The Sixteenth Annual Meeting of the Gulf Coast Clinical Society will be held at the Admiral Semmes Hotel in Mobile on October 18 and 19.

Speakers will be from the faculties of various medical schools, and a good program is assured. It should interest physicians from all over the State.

SEROTONIN IN THE BLOOD

Medical research has now demonstrated that serotonin in the blood, generally considered to be involved in the normal control of bleeding, apparently does not have this function.

Serotonin is a substance in brain and intestine, and in blood platelets. Although its presence in brain has puzzled scientists until very recently, there has been an acceptable explanation for the presence of serotonin in blood platelets almost from the time when its action there was discovered, in 1918. Serotonin can constrict blood vessels and it was thought that its liberation from ruptured platelets at the sites of wounds slowed down bleeding and encouraged the formation of clots. It is this assumption which has been challenged by the new research findings.

Scientists in the Laboratory of Chemical Pharmacology of the Public Health Service's National Heart Institute at Bethesda, Md. have found that by giving reserpine, a drug now widely used to treat mental illness and hypertension, they can liberate bound serotonin from the blood platelets of laboratory animals.

As a result the platelets are depleted of their serotonin. The time required for

wounds to stop bleeding in rats, rabbits, and guinea pigs so treated was the same as that required for untreated animals, the researchers reported.

"The ability of reserpine to deplete platelet serotonin has permitted a rather definite answer as to whether or not it has a function in hemostasis in mammals," the researchers explained in a recent issue of the *Journal of Pharmacology and Experimental Therapeutics*. "Since the loss of over ninety per cent of platelet serotonin fails to measurably increase the bleeding time, it is unlikely that it has such a function."

The findings concerning platelet serotonin were made in the course of a larger program at the Heart Institute aimed at elucidating the role of serotonin in the body. Related research by Institute scientists in 1955 disclosed the fact that the drug reserpine also liberates brain serotonin, and apparently causes its remarkable tranquilizing effects in the mentally ill by so doing. Serotonin, Institute researchers explain, appears to be important in the regulation of normal brain function. The role, if any, of the substance in platelets remains obscure.

The new findings concerning platelet serotonin were published by Drs. Parkhurst A. Shore, Bernard B. Brodie, and their associates, who conducted their research in the Heart Institute Laboratory of Chemical Pharmacology.

DISABILITY FREEZE IN SOCIAL SECURITY

In recent months many physicians have heard from patients about the disability freeze provision in the social security law. This provision, added to the old-age and survivors insurance program in 1954, permits people who have prolonged total disability to apply to have their social security records frozen for the period of their disability. Thus, the time when they could not work and so had no earnings credited to their social security accounts does not count against them in determining their rights to benefits, nor the amount of benefits which will be payable to them at age 65, or to their families in case they should die.

Before a worker's social security record can be frozen, he has to meet certain work requirements. His social security record up to the time of his disability must show that he was in fact a worker, with a fairly regular and recent work history. In addi-

tion, he must be shown to have a medically determinable physical or mental impairment severe enough to keep him from engaging in any substantial gainful activity—one which has existed for more than 6 months, and is expected to last indefinitely or end in his death.

SECURING THE MEDICAL EVIDENCE OF DISABILITY

The medical evidence needed to establish the nature and severity of the applicant's disability, the date it began, and its prognosis comes from the doctor who has treated the worker and knows his case, or the hospital or institution in which the worker has been confined. A medical report form was designed to assist the physician in furnishing the needed medical evidence and to indicate the nature and extent of clinical detail which would be necessary. It is given to the applicant for the "disability freeze" and he is asked to have it filled out by the physician most familiar with his impairment. The form itself is modeled closely after the medical report used by major life insurance companies in their disability claims work. In adapting it for use in the "freeze" program, the recommendations of a medical advisory committee were closely followed. This committee, composed of well qualified representatives of the medical and related non-medical professions, gives advice and guidance to the Social Security Administration on the medical aspects of the "disability freeze" program.

If you have received this medical form to fill out for any of your patients, you are probably aware that the law makes the disabled worker responsible for seeing that medical evidence is submitted for him and for paying any costs involved. The law does not permit the Government to pay any costs in connection with securing the medical evidence needed for a determination of disability. You may also know that to insure the confidentiality of the medical evidence, the medical report form is not to be returned to the patient, but is to be mailed by the physician direct to the local social security office. This office, incidentally, is ready to furnish additional information to the physician concerning the medical report form and the operation of the disability freeze.

DETERMINING DISABILITY

Determinations as to disability based on the evidence submitted are made under an

agreement with the Federal Government, by professional members of an agency of the state in which the applicant resides. In most states, this is the vocational rehabilitation agency. Since referral of disabled individuals for any rehabilitative services which might return them to gainful work is an important aspect of the program, each person applying for the social security disability freeze is told about the availability of vocational rehabilitation services.

On the professional team in the state agency at least one member is a doctor of medicine. The team reviews and evaluates all medical evidence assembled in the applicant's file, as well as such non-medical factors as age, education and occupational experience. Certain medical guides and standards, worked out with the advice of the Medical Advisory Committee are used in the consideration of the medical evidence. But, although these guides and standards can be applied in most cases, they are not rigid and arbitrary. The final determination in each case is based on all the available facts on the individual's impairment and vocational history, and there is consultation among physicians in any borderline situation.

GUIDES TO FILLING OUT THE MEDICAL REPORT FORM

No matter how good the standards, nor how considered the judgment of the reviewing team, the determination reached can be no sounder than the evidence upon which it is based. To make sure that he is providing sufficient medical evidence for a prompt and fair determination, the doctor will want to consider the following guides in filling out medical report forms for those of his patients who have applied for the social security disability freeze:

First, include sufficient clinical detail to enable the reviewing team to make a sound determination as to the severity and extent of the patient's current condition;

Second, give enough of the clinical history to provide information as to when the disability began, and when it became so severe as to keep the patient from working;

Third, describe the probable course of the condition from now on, so that a decision can be reached as to whether the impairment is likely to continue indefinitely, or end in death, or whether it is self-limiting, or remediable in the foreseeable future.

HYDROCORTISONE IN LOCAL INFLAMMATIONS

An answer can now be given to the question of whether or not hydrocortisone, when used on local inflammations (as in ointments or suppositories), is absorbed into the blood to exert its hormonal effects throughout the body.

Dr. Grant W. Liddle, in the April issue of the *Journal of Clinical Endocrinology and Metabolism*, described the action of a new drug which, by temporarily suppressing ACTH secretion in the body, allows scientists to measure the amount of hydrocortisone absorbed from local, or topical applications. Dr. Liddle is a researcher with the U. S. Public Health Service's National Heart Institute, National Institutes of Health, Bethesda, Maryland.

The new ACTH-suppressing drug is known as Delta FF (delta 1, 9 alpha-fluorohydrocortisone). It is a synthetic relative of the natural "glucocorticoid" hormones (e. g. cortisone and hydrocortisone) from the adrenal gland, which have been so valuable in treating inflammatory diseases. The new drug was developed from these natural hormones in progressive steps during recent years by chemists in several research laboratories.

Hydrocortisone, like cortisone, is given off into the blood from the adrenal glands in response to ACTH, a pituitary hormone. Although scientists have ways of judging the total amount of hydrocortisone present in the body, prior to the new findings there was no simple way of telling how much of this total came from the subject's adrenals and how much was absorbed from the topical application.

By suppressing the production of ACTH in the body, Delta FF prevents the adrenal glands from secreting natural hydrocortisone. All of the hydrocortisone found in subjects treated with Delta FF must therefore have been absorbed from the medication.

Dr. Liddle demonstrated the usefulness of the new drug in a pilot study on absorption of hydrocortisone from the skin and mucous surfaces in a series of normal volunteers. The findings from this group showed that very little (2%) of the hormone was absorbed through the intact skin, but considerable (26-29%) was absorbed from the

mucous surfaces studied (vaginal and rectal).

Hydrocortisone represents a powerful natural hormone which not only suppresses inflammation but also plays a part in regulating the body's use of carbohydrates and its responses to stress. It is important to know whether local applications of hydrocortisone get into the general circulation because its side effects can be dangerous when its use is not controlled.

ANNUAL MEETING AMERICAN PUBLIC HEALTH ASSOCIATION

The effectiveness of current public health programs on international, national, state and local levels will be analyzed in the five-day 84th annual meeting of the American Public Health Association and meetings of 40 related organizations in the Convention Hall, Atlantic City, New Jersey, November 12-16.

More than 4,000 public health workers from all parts of the free world are expected to attend. Representing both governmental and voluntary health organizations and institutions, they will include physicians, dentists, nurses, engineers, statisticians, veterinarians, sanitarians, nutritionists, health educators, entomologists, biologists, and other specialists concerned with disease prevention and health protection.

A keynote symposium entitled "How are we doing in public health?" will open the meeting, according to Dr. Reginald M. Atwater, executive secretary of the Association. Approximately 75 sessions will deal with various public health activities, both administrative and scientific, in relation to the health needs of people in a changing world.

Dr. Atwater said that nearly 400 papers will be given. Each of the Association's fourteen specialized sections will hold sessions dealing with latest research and other current aspects of its particular field. Other sessions will deal with subjects which cut across the lines of several specialties including prevention of communicable diseases, rehabilitation of the chronically ill, problems of the aging, adult health education, the impact of suburbanization on public health and industrial health, safety and sanitation.

"The American Public Health Association is a common ground where every discipline

of public health can make its contribution," said Dr. Atwater. "Since 1872, its annual meetings have provided an opportunity to exchange information and views.

"Each meeting has produced not only news of scientific and administrative advances in the field, but also a number of problems to be worked out through the combined efforts of public health workers," he said. "This year we are going to take stock of our achievements and of the work which lies immediately ahead."

Supplementing the meetings will be a week-long scientific and technical exhibit by governmental agencies as well as private firms whose products or services have health importance.

The American Public Health Association, with headquarters at 1790 Broadway, New York City, is the largest professional organization of public health workers in the world. Membership totals more than 12,000 men and women in North and South America. President is Dr. Ira V. Hiscock, chairman of the department of public health, Yale University.

Children Under Five Respond Well to Polio Vaccine—Polio vaccine appears to work as well in infants and preschool children as it does in school children, providing they receive at least two and preferably three inoculations, a recent Michigan study has shown.

Field trials of the Salk polio vaccine were carried out in 1954 among first, second and third grade children. Although the age range was extended greatly in 1955, little information has been obtained about responses in different age groups.

Since most immunization programs are begun in the early months of life, information about the response of infants to the polio vaccine is important, Gordon C. Brown, Sc. D., and Donald C. Smith, M. D., Ann Arbor, Mich., said.

They found that three inoculations evoked a satisfactory response in infants and in children one to five years old. Two inoculations appeared to be less effective and one injection in infants was definitely inadequate, they said in the June 2 Journal of the American Medical Association.

A booster inoculation six months after the first series raised the number of antibodies in the children's blood regardless of how many initial inoculations they had, or how they responded to the first shots. Even those who did not respond to the original vaccination did develop antibodies after the booster shot.

The researchers studied the responses of 135 infants and 116 preschool children. They were divided into five groups; each group received vaccines, made by different companies, on different dosage schedules.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THE PUBLIC'S OPINION OF DOCTORS—

PART I

W. A. Dozier, Jr.
Executive Secretary

The American Medical Association recently released information on a study it sponsored in order to find out what might be needed to improve the services of doctors. Parts I and II of this series will cover the news release from the A. M. A. Part III will attempt to point out certain factors most relative to Alabama physicians.

From the survey emerged a picture of what people like about and expect from their doctors: sympathy, patience, and understanding, rather than guaranteed cures and "wonder drugs." What they criticize is a matter of time and economics, not of personality or ability.

Major items shown by the survey are (1) Most Americans have their own family doctor; (2) Most of them like him, and like doctors as a group; (3) People's opinions gained from their own experience differ from those based on hearsay or other sources; (4) Doctors are more critical of themselves than are other people; (5) When people criticize physicians, it is largely for the cost of care; they do not, however, think doctors are trying to "get rich quick"; and (6) They are evenly split for and against "sliding scales" of fees.

Ninety-six per cent of the people who have a family doctor say they like him personally. Between 88 and 98 per cent have high opinions of his intelligence, capability, dedication to humanity, and personal interest in patients. Their most unfavorable comments are that he thinks he is always right and is hard to reach for emergency calls.

Americans have a good opinion of doctors generally; 93 per cent of all those surveyed say doctors as a group are "likable." But people are more inclined to think in impersonal terms and to use different standards in judging doctors other than their own. The proportion of favorable attitudes is lower, and denial of faults less emphatic, when they speak of doctors they do not

know personally. About doctors in general they are critical mostly of fees, coldness, impatience, lack of frankness, unavailability, and incompetence.

In personal interviews with 4,000 people during 1955, surveyors got the answers to questions based on preliminary discussions with the public and with physicians, and from current literature. Although the A. M. A. approved the questionnaires after completion, the survey firm said in its report "it is to be emphasized that the public, individual doctors, and the research agency established the issues."

Interviewees were selected so that the proportion of people from various age, economic, geographical, and other groups matched the proportion of such people in the total U. S. population. Among them were 3,000 private citizens, 500 practicing physicians, 100 editors, commentators, and columnists, 100 attorneys, 100 registered nurses, 100 registered pharmacists, and 100 non-physician executive secretaries of state and county medical societies. Questions about general public attitudes were asked only of the 3,000 individuals; the special groups were asked largely about professional or organizational matters. Doctors were asked their feelings about themselves and other doctors.

Here are some major results. Five-sixths (82 per cent) of Americans have family doctors. Ninety per cent of rural farm dwellers have their own physicians; and high percentages also are found among white collar workers, middle-aged, middle-income, college-trained people, and central state residents.

While two-thirds of these people once had other personal physicians than their present one, their reasons for changing doctors rarely include personality clashes or lack of faith in the doctor's ability. The most frequently given reason (by 19 per cent) is that the patient or the doctor moved. Only one-twentieth say they lost confidence and two per cent that they "found a better doctor."

Most people tend to think of their doctor

as "someone special" and feel that today, even more than 20 years ago, it is important to choose the right man. Fifty-eight per cent believe it matters "a lot," giving as reasons "ability, training, and equipment" first and confidence or sincerity next. The 24 per cent who say it doesn't matter explain most often that doctors have the same education and qualifications.

About eight of ten people think their doctor is "different." For their reasons, 32 per cent cite personal interest, sympathy, and kindness; 19 per cent competence, intelligence, and education; 17 per cent friendliness, personality, and manner; and nine per cent frankness and honesty. Small numbers mention availability, patience, understanding, acceptance of payment delays, and lower fees. None mentions healing powers or use of wonder drugs, although those who say choice of physicians is not important do mention drug use as a factor.

Of those persons who have a personal physician, only one per cent do not like him and three per cent give qualified or no replies. Ninety-nine per cent say he is capable and 88 per cent "highly intelligent." Between 80 and 90 per cent feel their doctor has enough personal interest, is frank enough, and gives his patients as much time as they would like.

Most people, when speaking of their own doctors, deny complaints listed in a true-false questionnaire. For example, ninety-one per cent deny (5% agree) that their doctor thinks he is better than other people; 87 per cent say (6% deny) that he is as dedicated to serving mankind as he should be; 82 per cent deny (5% agree) he is too quick to recommend operations; 80 per cent say (15% deny) he is frank enough about their illnesses; 78 per cent deny (15% agree) he keeps patients waiting longer than necessary. Seventy-nine per cent deny (16% agree) he charges too much; 77 per cent deny (10% agree) he plans to get rich quickly; 78 per cent deny (13% agree) his charges have gone up faster than other living costs; 74 per cent deny (19% agree) he is hard to reach for emergency calls; 71 per cent deny (23% agree) that he has the idea he is always right; and 66 per cent deny (13% agree) that he makes too much money compared with his patients.

Only on three statements of complaint was there less than 66 per cent denial, but

these three statements were not answered by about half the interviewees. They were (1) Your doctor charges higher fees to people who carry medical insurance: 48 per cent deny, 39 per cent no opinion; (2) Your doctor splits fees on referrals to other doctors: 32 per cent deny, 57 per cent no opinion; (3) Your doctor gets commissions from druggists: 31 per cent deny, 52 per cent no opinion.

Most people give the same reasons for liking doctors in general as they do for their own physicians, with some exceptions. They attach more importance to friendliness and manner, healing and curing, dedication, and professional attitude than when describing personal physicians.

Given a chance to criticize, one third have no criticism and 15 per cent "don't know" what they don't like about most doctors. Leading complaint, listed by 13 per cent, is "their charges and interest in money." Nine per cent mentioned each of these complaints: "don't take time and hurry you too much," "impersonal, cold, independent," and "not frank, speak half-truths, dishonest." Some of those listing dislikes say their complaints refer only to "some, not most" doctors.

Suggest Central Leukemia Information Agency—A group of California researchers have suggested that a central agency be established to collect information on children born of leukemic mothers.

Such an agency would offer a means of studying the causes of leukemia, a serious blood disease, on a wide scale, they said in the May 19 Journal of the American Medical Association.

The cause of the disease is unknown, although the possibility that it is virus-caused has been considered. Heredity also may play a role. Children born of leukemic mothers would be the best source of information on these possibilities, they said.

It is necessary to organize one agency to collect all this material, since it is highly improbable that any individual or institution would ever have the opportunity to study a sufficiently large number of similar cases to warrant statistical treatment, they said.

There have been at least 50 reported instances of leukemic mothers giving birth to living infants. None of the babies showed evidence of leukemia, according to the reports. There were no detailed studies of mother and child in the immediate postdelivery stage to determine similarities and differences in their blood. Moreover, follow-up studies of such offspring have been "sadly neglected," they said.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

USING PRESENT KNOWLEDGE TO CURB RABIES

Contributed by

Nadine Pitts, Director

Division of Public Health Education

Much is said and written about advances in medicine, about the knowledge which means better and longer lives for men, women and children. Among today's favorite "guessing" games is the approximate time when the disease poliomyelitis will be controlled, now that we have an effective vaccine to prevent a great many cases. Many people are guessing or wondering also about which disease will next yield to the onslaught of scientists and their studies.

Thus, there is a great deal of looking to the future, of wondering, "Where do we go from here?" At the same time, however, there might be a pause for a backward glance, as well as a consideration of the present. Such a pause might well be sobering, as indeed it was for at least one public health official early in 1956. The occasion was Alabama's annual convention of public health workers, and the speaker in question was Florida's state health officer. He drew a vivid word picture of the work of public health agencies in the future. But not before he emphasized the great importance of using the knowledge we already have for bettering human health and extending life spans.

To what knowledge did this health official refer? What particular diseases did he have in mind? Can you think of one disease which we know a great deal about preventing, but which still occurs from time to time? You might not have thought of one particular disease, one which we have known how to control for approximately three-quarters of a century. You might not have done so because you will not see its victims as you walk down the main street of your home town. You may read about them, the victims, in the paper, but you cannot see them. For once the disease de-

velops in a person, certain characteristic symptoms occur, and the outcome is death.

The disease is rabies, and perhaps few others generate such fear. Not only is rabies fatal once it develops, but it is truly called dreadful as it runs its course in the human body. Few individuals, indeed, fail to connect the slightest mention of the word rabies with a frothing or "foaming at the mouth."

Here, then, we have a disease with fatal results and horrible nature. At the same time, we have the knowledge and the means to stamp it out. But we have not done so completely. The Alabama State Department of Health, for example, had to report a human death from rabies the first month of 1956. It was the state's first reported human rabies death since 1954, when another single fatality occurred. There was a single death the year before that, none in 1952 and two deaths during 1951.

What are the reasons why we have not stamped out this disease and thus have to continue to report deaths it causes from time to time? Chief among the reasons appears to be a difficulty in arousing people to rabies' potential menace. We mentioned earlier that you will not see victims of rabies on the street corner. However, you may see many crippled victims of diseases such as poliomyelitis. Thus, rabies develops in only a handful of persons, as compared with the multitude of persons afflicted with some other maladies. Because this is true, it is perhaps natural and pleasant, as one writer in a recent issue of the Journal of the American Medical Association put it, to think of rabies as a disease of the far past and of the faraway. It is somehow hard for persons to realize that the disease can occur in their community. The Alabama death in early 1956 occurred in Mobile county. But it might well have happened in another part of the state.

Rabies, then, is often dismissed by many persons because they believe it does not inconvenience them. Actually, however, the disease affects the public a great deal more than many people realize. Rabies af-

fects not only its victims. First of all, the fear it produces prompts many individuals to obtain rabies "treatment," sometimes unnecessarily. There was one human death attributable to rabies in 1953. However, during the same year, a total of 1,624 series of rabies treatments was given. Next, rabies poses an economic problem as well. Many Alabama farmers could tell you, if asked, that a rabid fox or dog did not attack and bite them. The rabid animal attacked their cattle, instead. The cattle died within a few days, and one farmer, for example, who started out with 25 cows might wind up with only 20, due to five cases of rabies in his herd.

With these facts in hand, one question might well be asked, "Why tolerate or endure rabies?" And the answer is that we do not have to tolerate the rabies that exists today. We can control it. The fact that the disease can be controlled has been well demonstrated in many areas. Dr. Hilary Koprowski, writing in a recent issue of *The Pediatric Clinics of North America* (for February 1955) tells that rabies extends throughout the world except in Australia, the British Isles and some Scandinavian countries. It is in these areas and some others that effective control has been well demonstrated.

Thus, we know that we can control rabies. The job that remains is the development of a desire or wish to control it. Perhaps all public health officials agree that education, quarantine and the mass immunization of the dog population are the master keys to control.

Rabies, as you may know, is a disease that can attack man, dog and all other warm-blooded animals. Man becomes an "accidental" host to the disease, so to speak, through exposure to the saliva of a rabid animal. This saliva contains the viruses which produce the disease.

The rabies virus is said to have a particular affinity or liking for the brain and the spinal cord. It attacks these tissues in man and animals, working its way from the point of entry into the body—a bite on the leg, for example. The incubation period, or the time it takes the virus to reach the brain and spinal cord, varies. It may take two weeks to several months. However, as we pointed out earlier, once the virus reaches the brain, it produces the typical symptoms

and the outcome is fatal. The early signs that the disease had developed may be fever, nausea and sore throat. Or infants with the disease, for example, may refuse food, or appear restless and irritable. Some other symptoms may also be present, such as pain at the site of infection, tingling and burning sensations, or a persistent loose cough, dilatation of the pupils of the eyes and increased salivation.

As the disease progresses, the victim is beset by spasmodic muscular contractions. These may affect the muscles of the respiratory system, and result in labored or difficult breathing. There may be the same kind of spasmodic contractions of the mouth and throat muscles. This results in difficulty in swallowing, and explains rabies' common name—hydrophobia, which means fear of water. Later, the muscles responsible for speaking may be completely paralyzed, with a consequent loss of voice. Then paralysis may become more general throughout the body.

There are measures that can be taken following the bite of an animal which are effective in preventing the disease from developing. The name given to a series of preventive vaccine injections is rabies "treatment," although strictly speaking this term is not correct, since treatment is usually thought of as measures taken after a disease has already developed. The vaccine is usually given in 14 daily hypodermic doses. In Alabama, the vaccine is made available to physicians and to County Health Departments by the State Health Department's Bureau of Laboratories.

We have referred to the fear that rabies engenders in the minds of many people. It is this fear which sometimes prompts an individual to request antirabic treatment unnecessarily. So great is the dread that an individual whose unbroken skin has come in contact with a rabies-infected dog's saliva may obtain the relatively expensive treatment, even though the treatment is not indicated, because his chances of having rabies are nonexistent! Similarly, a dog owner may request or demand treatment following a bite, even though the dog remains normal 14 days after biting, whereas if rabies had been present, the dog would have died.

The specific determination of the pres-

ence of rabies is the demonstration of clumps of cells called Negri bodies in the animal's brain. In Alabama, the State Health Department's central and branch laboratories routinely perform such examinations. During 1954, for example, the heads of 458 animals—chiefly dogs, cows, foxes and cats—were found positive for rabies.

Because the brain of an animal suspected of having rabies is needed for laboratory examination, care should be taken in handling biting animals. First of all, if possible, the animal should be captured. If this can be done, the animal can be observed for a short period of time. If he remains alive for about 14 days, he does not have rabies, and the bitten person is not in danger from the disease.

An attempt should be made to shoot the animal, which cannot be caught, in a part of the body other than the head. The local health department or your veterinarian can suggest ways for preserving the animal's head and forwarding it to a public health laboratory for examination. The head should be refrigerated, but in no case should it be frozen.

We pointed out earlier that mass immunization of the dog population was one of the master keys to control of rabies. There is a reason why this is so. A recent publication of the Alabama State Department of Health points out that dogs are pets for more children than any other animal. Thus, dogs spread rabies, especially in urban or city areas, to people more often than other biting animals. The title of that publication therefore addresses itself to the parents and adults in Alabama communities: "Your Job—Keep Them Safe From Rabies."

Alabama, as well as other states, has laws which have been passed to prevent the spread of rabies. For instance, the Alabama Dog Control Act was passed by the State Legislature in 1937. This act requires all dog owners who do not constantly keep their animals confined or on leash when out of the kennel to have them vaccinated once each year against rabies. Moreover, this law provides for the impounding of stray unvaccinated dogs, as well as penalties for not having dogs vaccinated, and confinement of biting dogs and animals suspected of having rabies. To enforce this law, each County Board of

Health once each year appoints a rabies inspector.

Experience has shown that this law has worked best in communities where the public cooperates in enforcing the regulations. For example, individuals in a co-operative community will report stray dogs to the rabies inspector, even though the law may not require this action. Moreover, owners of young dogs in such communities will have them vaccinated first at three months of age, and once each year after that. And the citizens of such towns may support trapping programs if a rabies outbreak occurs among foxes and other wild animals.

A spokesman for the Illinois Department of Health wrote a few years ago that man and dog have had a pleasant relationship for centuries. He pictures the dog as "man's companion from his cave-dwelling existence to his penthouse luxuriance." Rabies has been the only flaw, the only stumbling block in this companionship. But he goes on to point out that some individuals fail to recognize rabies as such. In fact, such persons become so attached to their pet dogs that they think of them as incapable of having rabies. No dog is immune from rabies without vaccination once each year, with the vaccine in use at the present time.

By the same token, the dog that is not vaccinated can become infected with rabies virus, and he not only can but will bite human beings in his rabid state. Voluntary community programs and obedience of the rules and regulations for control are the best assurances that human beings and pet animals will be protected from rabies.

Hardening of Arteries Found in Elephant—Heart attacks resulting from the effects of hardening of the arteries can strike elephants as well as men and dogs, three California doctors said recently.

They reported an autopsy on a female Indian elephant who died of acute heart failure secondary to severe arteriosclerosis in many small arteries around the heart.

According to the physicians, their report in the March Archives of Pathology, published by the American Medical Association, is the first one describing arteriosclerosis in elephants. It has previously been found in humans, cats, dogs, pigs, birds, chickens, and cows.

Few autopsy reports on elephants have been made, but studies go back to ancient Greece and Rome, the authors said. Both Aristotle, the Greek philosopher, and Galen, a Greek physician who lived in Rome about 200 A. D., reported elephant studies, with Galen describing a heart condition as "a bone in the heart."

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1956

Examinations for diphtheria bacilli and Vincent's	169
Agglutination tests	676
Typhoid cultures (blood, feces and urine)	569
Brucella cultures	4
Examinations for malaria	61
Examinations for intestinal parasites	2,949
Darkfield examinations	2
Serologic tests for syphilis (blood and spinal fluid)	23,012
Examinations for gonococci	1,399
Examinations for tubercle bacilli	3,462
Examinations for Negri bodies	113
Water examinations	1,696
Milk and dairy products examinations	4,832
Miscellaneous examinations	693
Total	39,637

* * *

March 1956

Examinations for diphtheria bacilli and Vincent's	117
Agglutination tests	756
Typhoid cultures (blood, feces and urine)	574
Brucella cultures	4
Examinations for malaria	67
Examinations for intestinal parasites	3,149
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	25,358
Examinations for gonococci	1,347
Examinations for tubercle bacilli	3,517
Examinations for Negri bodies	103
Water examinations	1,899
Milk and dairy products examinations	5,085
Miscellaneous examinations	631
Total	42,617

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	Jan.	Feb.	E. E.* Feb.
Typhoid and paratyphoid fever	0	1	1
Undulant fever	0	2	1
Meningitis	14	12	17
Scarlet fever	25	80	52
Whooping cough	63	44	96
Diphtheria	17	15	19
Tetanus	1	1	2
Tuberculosis	178	160	189
Tularemia	3	0	2
Amebic dysentery	0	1	2
Malaria	0	0	0
Influenza	1393	933	2051
Smallpox	0	0	0
Measles	99	240	346
Poliomyelitis	1	0	5
Encephalitis	7	1	0
Chickenpox	296	471	340
Typhus fever	0	1	1
Mumps	406	503	164
Cancer	416	402	310
Pellagra	0	0	1
Pneumonia	391	326	364
Syphilis	120	141	221
Chancroid	3	2	7
Gonorrhea	377	340	325
Rabies—Human cases	1	0	0
Positive animal heads	31	34	0

* * *

	Feb.	Mar.	E. E.* Mar.
Typhoid and paratyphoid fever	1	1	4
Undulant fever	2	0	3
Meningitis	12	7	15
Scarlet fever	80	274	41
Whooping cough	44	54	96
Diphtheria	15	12	15
Tetanus	1	0	2
Tuberculosis	160	203	215
Tularemia	0	0	2
Amebic dysentery	1	2	2
Malaria	0	1	1
Influenza	933	796	2764
Smallpox	0	0	0
Measles	240	761	477
Poliomyelitis	0	0	4
Encephalitis	1	4	1
Chickenpox	471	396	452
Typhus fever	1	1	1
Mumps	503	615	189
Cancer	402	338	357
Pellagra	0	0	2
Pneumonia	326	244	358
Syphilis	141	156	342
Chancroid	2	1	9
Gonorrhea	340	365	412
Rabies—Human cases	0	0	0
Positive animal heads	34	46	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR DECEMBER 1955, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During December 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	7167	4318	2849	26.0	25.8	26.7
Deaths	2574	1495	1079	9.4	9.0	9.5
Fetal deaths	174	72	102	23.7	20.4	21.1
Infant deaths—						
Under one month	182	85	97	25.4	24.5	23.4
Under one year	291	114	177	40.6	39.6	37.6
Cause of Death						
Tuberculosis, 001-019	21	11	10	7.6	14.3	15.6
Syphilis, 020-029	4	1	3	1.4	6.2	2.6
Dysentery, 045-048	1		1	0.4	0.4	0.4
Diphtheria, 055	6	2	4	2.2	1.1	0.8
Whooping cough, 056	3		3	1.1	0.4	0.8
Meningococcal infections, 057	1		1	0.4	0.4	3.0
Poliomyelitis, 080, 081	1	1		0.4	0.4	0.4
Measles, 085					0.4	
Malignant neoplasms, 140-205	307	211	96	111.6	106.9	99.1
Diabetes mellitus, 260	36	26	10	13.1	13.2	10.4
Pellagra, 281	2	1	1	0.7	0.7	0.8
Vascular lesions of central nervous system, 330-334	337	183	154	122.5	102.5	122.5
Rheumatic fever, 400-402	2	2		0.7	2.9	2.2
Diseases of the heart, 410-443	821	514	307	298.3	278.5	282.2
Hypertension with heart disease, 440-443	170	82	88	61.8	55.8	61.3
Diseases of the arteries, 450-456	50	31	19	18.2	18.0	22.3
Influenza, 480-483	26	13	13	9.4	10.7	7.8
Pneumonia, all forms, 490-493	106	48	58	38.5	42.6	44.6
Bronchitis, 500-502	6	1	5	2.2	1.5	2.2
Appendicitis, 550-553	2		2	0.7	0.4	1.5
Intestinal obstruction and hernia, 560, 561, 570	7	5	2	2.5	5.9	4.5
Gastro-enteritis and colitis, under 2, 571.0, 764	19	6	13	6.9	2.6	3.0
Cirrhosis of liver, 581	14	13	1	5.1	5.5	5.6
Diseases of pregnancy and childbirth, 640-689	8	5	3	10.9	9.8	13.6
Congenital malformations, 750-759	32	22	10	4.5	5.4	4.5
Accidents, total, 800-962	185	116	69	67.2	56.9	81.3
Motor vehicle accidents, 810-835, 960	90	67	23	32.7	19.5	36.8
All other defined causes	461	246	215	167.5	159.5	170.9
Ill-defined and unknown causes, 780-793, 795	116	37	79	42.2	50.0	46.4

PROVISIONAL BIRTH AND DEATH STATISTICS FOR 1955, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Recorded			Rates		
	1955 (Prov.)	1954 (Final)	1949-1953 (Average)	1955 (Prov.)	1954 (Final)	1949-1953 (Average)
Live births	81217	82327	82970	25.1	25.7	26.7
Deaths	26196	26051	26851	8.1	8.1	8.6
Fetal deaths	1871	1852	2133	22.5	22.0	25.1
Infant deaths—						
under one month	1808	1899	2064	22.3	23.1	24.9
under one year	2602	2748	3151	32.0	33.4	38.0
Cause of Death						
Tuberculosis, 001-019	344	414	710	10.6	12.9	22.9
Syphilis, 020-029	75	100	145	2.3	3.1	4.7
Dysentery, 045-048	11	21	31	0.3	0.7	1.0
Diphtheria, 055	25	12	21	0.8	0.4	0.7
Whooping cough, 056	23	11	28	0.7	0.3	0.9
Meningococcal infections, 057	23	29	30	0.7	0.9	1.0
Poliomyelitis, 080, 081	20	31	25	0.6	1.0	0.8
Measles, 085	3	19	26	0.1	0.6	0.8
Malignant neoplasms, 140-205	3291	3134	2907	101.6	97.8	93.7
Diabetes mellitus, 260	284	297	319	8.8	9.3	10.3
Pellagra, 281	13	25	31	0.4	0.8	1.0
Vascular lesions of central nervous system, 330-334	3395	3423	3211	104.8	106.8	103.5
Rheumatic fever, 400-402	36	55	45	1.1	1.7	1.4
Diseases of the heart, 410-443	8451	8227	8061	260.8	256.8	259.8
Hypertension with heart disease, 440-443	1720	1803	2153	53.1	56.3	69.4
Diseases of the arteries, 450-456	515	484	391	15.9	15.1	12.6
Influenza, 480-483	172	181	287	5.3	5.6	9.2
Pneumonia, all forms, 490-493	786	814	1001	24.3	25.4	32.3
Bronchitis, 500-502	36	45	45	1.1	1.4	1.4
Appendicitis, 550-553	28	42	60	0.9	1.3	1.9
Intestinal obstruction and hernia, 560, 561, 570	114	159	162	3.5	5.0	5.2
Gastro-enteritis and colitis, under 2, 571.0, 764	128	132	172	4.0	4.1	5.5
Cirrhosis of liver, 581	137	162	150	4.2	5.1	4.8
Diseases of pregnancy and childbirth, 640-689	83	109	141	10.0	12.9	16.6
Congenital malformations, 750-759	352	348	343	4.3	4.2	4.1
Accidents, total, 800-962	1883	1837	1860	58.1	57.3	59.9
Motor vehicle accidents, 810-835, 960	840	801	824	25.9	25.0	26.6
All other defined causes	4818	4916	5390	148.7	153.4	173.7
Ill-defined and unknown causes, 780-793, 795	1150	1024	1259	35.5	32.0	40.6

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population

AMERICAN MEDICAL ASSOCIATION NEWS

Doctor Discusses "Emotional Heart" of a Child
—A child has two hearts—the physical one and the emotional one, Dr. Willis J. Potts of Children's Memorial Hospital, Chicago, said recently.

The physical heart is "a rugged mechanism that will tolerate the ravages of infection, the scars resulting from impaired blood supply, and the approaches of surgeons' tools," he said. But the emotional heart is "a delicate mechanism, sensitive to the slightest wound of fear, insecurity, indifference, thoughtlessness and misunderstanding."

Doctors often must deal with both hearts, but even when they are not working with the physical heart they must consider the emotional one, Dr. Potts said in the June 9 Journal of the American Medical Association. The emotions aroused in children by encounters with doctors and nurses, long hospital stays, and surgical operations can leave deep and serious psychological scars.

Little children are afraid of doctors because of previous unpleasant procedures to which they have been subjected. "We might as well admit it—until we have completely won the confidence of children we are ogres to them," Dr. Potts said. He added that it is possible to win them over with patience, a smile, a fundamental love of children and "a cultivated tolerance of their eccentricities."

But a doctor's primary concern is with the effect upon the emotions of the infant or child whose illness is severe enough to require hospitalization and operation. During a prolonged hospitalization the child needs more than the minimum of attention. Even under the most hygienic surroundings the child will develop poorly—physically and mentally—unless he gets "essential tender, loving care."

To many children a hospital experience is a nightmare, he said. Before the age of reason, a child is unable to comprehend why he should be separated from his mother. Nurses frequently can act as substitute mothers to the very small child, but the three or four-year-old wants his "mommy."

Dr. Potts said, "To mothers I suggest that the child be given the attention he craves, sick or well. A sick baby in the hospital should be visited every day, and at the earliest possible date he should be taken home. There is no place in the world like home for a child. Even the poorest home, where there is accord, is better than the finest hospital.

"If the child must remain in the hospital long, visit often and crowd in as much attention as possible during those few hours. Whatever spoiling may be done during the visiting hours will be counteracted during the rest of the day

and night. The child will naturally cry when the parent leaves, but return visits will dispel the fear of being forgotten or deserted."

Children from five to eight years of age are often equally unhappy, but can be steered into a better frame of mind during the long 21 hours between visiting periods, by nurses, residents or interns. These, with "a cultivated sixth sense," make the children feel they have not entered "torture chambers but have been admitted to a place where folks are going to help them get well and where they are interested in their happiness."

Dr. Potts said reactions of children entering a hospital for operations vary from childish bravado to sheer panic. One seven-year-old, when he learned that he would not need an operation, made a gesture of wiping sweat from his brow and exclaimed, "Boy, that was a close one." Another little boy said in response to what he considered bad news, "You know what? Lions eat people and I hope they eat you." Dr. Potts commented, "One will not have to worry that such children will have repressions."

He said that children from stable, closely knit, rural families are especially cooperative in the hospital. Other children, who have few restrictions at home also learn to cooperate when they are in the hospital for long periods. In fact, they actually enjoy the intelligent restrictions of an orderly life, he said.

It is well to prepare the child for what is in store for him, Dr. Potts said. Operations should be explained; most children adjust quite well. One child said after the explanation about anesthesia and operation, "you don't have to tell me all that stuff. I know about it—I saw it on TV." Another youngster, whose mother had told her that she was entering the hospital for "another test," informed her mother that she knew it was for an operation. Frightened children need reassurance from parents, nurses and doctors.

"Children are such amazing little creatures," Dr. Potts said. "Tell them in simple words why they have to go to the doctor or the hospital or why they have to have an operation and, in most instances, they will cooperate in a fashion that adults might well emulate. Faith and trust are completely unspoiled when children are dealt with honestly. So little effort; so great the reward."

He said, "The mystical heart of a child is a precious and beautiful thing. It is marred only by wounds of a thoughtless and not too intelligent world." The emotional heart is especially vulnerable during episodes of illness and efforts should be made to avoid wounds that will leave irreparable scars.

He concluded, "I am convinced that the heart of a child sunned by love, security, and under-

standing will be able to withstand the storms of illness and pain."

Outline Fast, Inexpensive Cure for Parasites—

Two parasitic infections, found in an estimated 19 million Americans, can now be cured within a week because of the simplification of an old treatment method.

Piperazine citrate (Antepar) has been used for several years to treat enterobiasis and ascariasis but the treatment was extended over periods of seven to 21 days with several doses of the drug given each day.

Now piperazine citrate, given in large daily doses for seven instead of 14 days, has cured 58 of 60 patients with enterobiasis. One large dose cured ascariasis in 34 of 46 patients and two doses cured it in 50 of 53 patients, Harold W. Brown, M. D., Kam-Fai Chan, M. D., and Kathleen L. Hussey, Ph. D., of Columbia University College of Physicians and Surgeons, New York, said in the June 9 Journal of the American Medical Association.

It is estimated that 16 million persons in the United States are infected with the pinworm *Enterobius vermicularis*, while more than 200 million persons in the world harbor it. Unlike many intestinal parasites, it is not limited to the rural and poor classes, but is found in all urban economic groups.

Until recently the "drugs of choice" for treating enterobiasis were gentian violet and oxy-

tetracycline (Terramycin), but many persons cannot tolerate gentian violet, and oxytetracycline is expensive.

Previously piperazine was given for seven days, discontinued during a seven-day rest, then given for seven more days. The rest period allowed immature worms—not affected by piperazine—to grow into the mature, susceptible stage. However, it was found that eggs remained in the body during the rest period, making possible self-infection as well as spread of infection to the patient's family.

The seven-day treatment, in which one massive dose is given daily before breakfast, prevents such infection and reduces the expense by lowering the amount of piperazine needed, they said. The one massive dose increases the drug's effect on the worms by raising the concentration in the intestinal tract. In a schedule of several small doses given with meals, some of the drug's effectiveness apparently is lost because more of it is absorbed from the tract.

With ascariasis, two large doses of piperazine have been found to be just as effective as several small doses spread over five days, the authors said. They tried giving one massive dose of piperazine in an attempt to increase the efficiency of treatment and to reduce cost. It was effective in 74 per cent of the 46 cases. Two large doses in two days were effective in 94 per cent of the 53 cases.



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84-5384

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

August 1956

No. 2

THE CARE OF ADOLESCENTS

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As an introduction to these comments about the care of adolescents, I would like to say just a few words about the Adolescent Unit at the Children's Hospital in Boston. To tell you what this Unit is and why it is may serve to point up some of my remarks.

The Adolescent Unit Clinic cares for all the ailments which young people in the age group between 12 and 21 years of age suffer. It is not a psychiatric clinic; it is not a specialty clinic; it is a general practice clinic for an age group. General practitioners, internists, and pediatricians work there together, caring for the backaches, indigestion, cramps, blood disorders, or failure in school—whatever it is that brings young people of this age group to the hospital. We try to treat these youngsters with a good deal of thought as to what kind of people they, and other adolescents, are: the emphasis is definitely on helping and understanding the person rather than on a particular disease or organ.

This clinic was developed because we feel that young people in this age group *are* different; and that therefore they deserve a special type of care. We know that they don't mix in well with younger people or

with older ones, and feel that they ought to have a clinic of their own where they can tell their own story, where they can begin to take responsibility for their own health, and where they can now have the privilege of having a doctor of their own. Furthermore, we felt that if we are ever to do effective research in their ailments, we should have some clinics which focused exclusively on this age group; and that if we were to offer physicians special training in adolescents' care, we should have a place where they could see sufficient numbers of them so that their skill could be developed.

Those few remarks about the Adolescent Unit perhaps will serve to suggest that although this age group has very few illnesses of its own, its people have some special characteristics and are sufficiently different so that we feel they deserve and need special handling if they are to have the most effective kind of care. Obviously, if we are to give a patient the best care, it is not enough to understand his particular disease—the nephritis, the diabetes, the backache; it is equally important to know the person, his or her characteristics, needs and worries. These may affect, may even cause, the symptoms, and may certainly modify the course of the disorder. One needs to be interested in *them*, not just in their disease. That, obviously, is the way one should regard all patients, but it is literally imperative with the adolescent.

That comment brings us to a brief discussion of some of the characteristics of adolescents which we feel one should always keep in mind regardless of the nature

Read before the Association in annual session, Birmingham, April 19, 1956.

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Studies upon which some of this material is based were supported by The Grant Foundation, Inc., and The Commonwealth Fund.

of their complaint. I said that it is imperative to be interested in them. This is because of one of their outstanding characteristics: their extraordinary over-concern with themselves. They are so intent on developing their own personalities and so alert and resistant to any efforts to mold them or to push them around that it really is impossible effectively to deal with them unless you pay just as much attention to them as you do to their symptoms. They watch your every move and gesture and word, and unless you are genuinely interested in them, they will sense it and you will find them difficult to treat. They behave this way because they are just now in the process of molding their personalities: they are still very unsure of themselves. They have not yet reached that stage of development and security that will allow them to compromise, to accept readily other people's suggestions, to modify their ideas and attitudes. Their own ways of doing and thinking have come hard and they are not easily going to give them up. On the other hand, if they find that you are really interested in them as they are, not critical, not anxious to change them, more willing to listen than to tell them, you'll be off to a good start.

In order to meet this characteristic of theirs and to establish the fact of our interest in them, we have given them a clinic which is exclusively theirs. We see them by appointment, and we try not to keep them waiting. We introduce ourselves to them: we don't want them going out, not knowing what doctor they have been talking to. We allow them plenty of time for their first visit. We see them alone (their parents are seen separately and preferably on another day) so that they won't be kept waiting and so that they themselves will have an opportunity fully to tell their own story and to begin to take responsibility for their own health. Subsequently we discuss our findings and possible methods of treatment with them. When we are taking their histories, we discuss not only their symptoms but such things as school, their hobbies, their activities, plans for the future, anything we may feel of importance to them. These, though perhaps not intimately connected with their symptoms or ailments, often turn out to be more of a factor than we would have suspected.

Another matter which we feel we should always keep in mind when dealing with

these young people is their over-concern with their size and maturation. They dislike being different: to be different or not to be average is to them to be abnormal. There are few of them who know the difference between not being average and not being normal, so we have to keep in mind the possibility that anxiety regarding their growth or sexual development may be the cause of the headache or the indigestion or whatever the symptom may be that brought them in. We have to remember that growth means a great deal to them and be very careful what we say to them about their state of growth or their degree of maturation or about any bodily defect that we may encounter. They are very concerned about their bodies, very loath to admit, even to themselves, that anything is wrong and very anxious to be just like everybody else, unless to be different means that they are perhaps a little taller and therefore a little more likely to be successful at basketball! In dealing with those who do vary in rate or time or extent of growth, we need to realize how long it may take fully to reassure them about their own normality and we need to remember that any efforts on our part to modify their growth may mean to them that we, too, find them unacceptable as they are and feel that some change should be made. If their growth and development are really normal, as they almost always are, it is certainly wise to make every effort to get them to understand this and to get them to accept themselves as they are rather than to attempt in one way or another to modify what, for them, may be the best way of growing. In dealing with such a problem (and, as a matter of fact, with all adolescents), it is important also to remember this age group's great capacity for change. Within a short period of time a short boy can become tall, the careless boy very responsible, the tom-boy sort of girl very feminine.

In planning the treatment and management of adolescents' ailments, it is also very important to remember the adolescent's habit of strenuous living. Most of them want to live hard, and most of them do live hard. They just don't play around in the sandbox any more; they don't sit at an office desk; they go at things to win, to succeed. They know that in this highly competitive world one has to be aggressive and go at things hard in order to gain ac-

ceptance and prestige. If there is one thing the adolescent wants, it is recognition and prestige, and this he is never going to get by taking things easy. So in evaluating his knee or his back or his heart, before telling him what he may or should do, it is well to stop to remember that in the first place he is apt to go out from our office and use that heart or back or knee in a much more strenuous fashion than either a little child or we would; and secondly, that in order to gain prestige and acceptance from his own age group, it is usually desirable that he should do so. At least, if he has to be restrained and restricted, we should do what we can to offer some substitute kind of activity in which he may gain success and some degree of applause from his own age group.

If we are going to attempt to evaluate the fitness of his heart for something strenuous, it is obvious that we must put it under a test which is itself strenuous. It will be of little value just to listen to his heart as he lies on the table and subsequently to ask him to hop on one foot 50 times. When he leaves your office, he is going to do something much more strenuous than that, if he has his way about it, so we must put his heart under stress comparable to that which it would be under were he to run a mile, play basketball or football.

The same sort of thinking is applicable to the evaluation of the painful back or the previously sprained knee. It isn't enough that the knee be free of fluid and have a full range of motion. The quadriceps must be strong enough so that it will have some chance of holding up against the sort of stress that will come its way when the boy goes back to football. The back must be strong enough to stand pole vaulting, not just strong enough so it can resist the tired doctor's hand. In connection with this matter I can't resist taking a moment to refer to a young physician brought up in this city and now doing an outstanding job in orthopedics in Boston: Dr. Thomas DeLorme, who, as many of you know, developed the technique known as progressive resistance exercise. His methods, and the philosophy behind them, have been a great boon to adolescents. He believes in building strength so that the adolescent can withstand stress rather than restricting and restraining the adolescent so that he will never meet the stresses and strains which

are the inevitable lot of, and desirable for, the average boy.

As part of taking the adolescent's medical history, no one matter is of any more importance than that of school. Not to inquire into school, how school is going, what future education plans the boy or girl has, how he or she is getting along with teachers is to omit what is very frequently the cause of the nausea or tired feeling of which your patient complains. Too frequently it seems to be school that gives them a pain, or school that makes them sick and tired.

As a basis of some of their anxiety and emotional difficulties adolescents have many of the same problems that bother young children and adults. However, for them, sex, breaking away from their parents, the acquisition of independence, and the business of acquiring prestige and acceptance from members of their own age group are the major matters.

We who see them rebel sometimes forget that dependency and conformity, which are so much more peaceful and so much less annoying, are in the long run, far less desirable. The boy or girl who doesn't want to, who doesn't try to, stand on his own feet is in for a rough time in later life. The youngster who is having an awkward time getting on his own feet may slam a few doors and be quite impertinent, but at least one can be consoled by the thought that he is trying hard to get over the need of having to lean on his parents.

These, then, are some of the things about these young people which we feel all doctors should keep in mind whenever treating them. It is my feeling that the care of the adolescent is the province of whatever doctor it is who is really interested in them. It seems to me not to matter a bit whether this is the general practitioner, the internist, the pediatrician, the gynecologist or the surgeon. The important thing is that the physician really be interested in these people and that he have some understanding of what they are like and what their needs are, as well as a knowledge of their diseases. This is equally true of their emotional disorders. As a matter of fact, most adolescents are resistant to the suggestion that they go to a psychiatrist, and, since this is so, it is doubly important that the general practitioner and other physicians be willing and able to take time to sit down with these

young people and hear them out. Often, if they are willing to do this, they will find that they are quite successful in helping young people with many of their emotional and behavior disorders. Furthermore, in those instances where the ailment is more severe, the physician who has taken time and pains to try to help is in a position to be able to persuade his patient to go to a psychiatrist.

In general I feel it highly desirable that, regardless of the nature of the symptom or disorder, the boy or girl have his or her own doctor to whom he can go freely and discuss either physical or emotional worries. To decide without seeing a youngster or only after an extremely brief visit that this kind of emotional difficulty or delinquent behavior is beyond your capacity to handle may be to reject a youngster just at the time when he most badly needs the sort of man he thought you were. Far be it from me to suggest that you continue to treat young people whose emotional or behavioral disorders could be much better handled by someone with professional training along these lines, but I would urge that just as you

should be quick to refer those who require the attention of someone whose competence is greater than yours, so also should you be slow to refer those who, for all you know, after a visit or two with you, might very considerably be benefited. It is well to remember that training is not everything, and that the adult who is genuinely interested in young people, and who intuitively now and then says just the right thing may be of more assistance to him than the person who is better informed. How you feel toward these young people can be a greater factor than what you know about them.

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NEWER CONCEPTS OF DRUG THERAPY IN RHEUMATOID ARTHRITIS

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Rheumatoid arthritis still represents one of the greatest problems in long-term management confronting the average medical practitioner. In its over-all treatment nothing replaces a basic program of adequate nutrition, good personal hygiene, and physical measures, such as heat and regulated rest and activity. (The latter are well presented in a pamphlet, *Home Care in Rheumatoid Arthritis*, obtainable from the Arthritis and Rheumatism Foundation, 23 West 45th Street, New York 36, New York.)

Salicylates are, without question, the most useful medicinal supplement to such a program and are usually considered to be a

part of the basic regimen itself. While the benefit is sometimes subtle, in adequate dosages there is often a distinct symptomatic response. In patients showing some such response it is advisable to prescribe "around-the-clock" administration of 10 to 20 grains, three to six times daily. This may often be modified to fit better an individual's particular pattern of symptoms.

There are many salicylate preparations available but none appears to transcend aspirin itself in antirheumatic effect. In the occasional patient who suffers significant gastric irritation the enteric-coated tablet or one of the basic salts (e. g., sodium salicylate) will prove useful as a substitute. There is little or no indication for using the intravenous route.

If the disease is not reasonably well controlled on such a basic program, institution of chrysotherapy should be considered. Salicylates should be continued to the ex-

Read before the Association in annual session, Birmingham, April 20, 1956.

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tent that they are tolerated and are providing some therapeutic results.

CHRYSOTHERAPY

The naturally undulating course of rheumatoid arthritis has made it difficult to determine the true value of gold preparations, despite their extensive use. Most rheumatologists, however, recommend the addition of a soluble gold salt, such as gold sodium thiomalate, gold sodium thiosulfate, or gold thioglucose, as the next step when the patient is not reasonably well maintained on the basic program of management.

The effect of soluble gold preparations is rarely sudden and dramatic, but when given over a period of months (and in some cases even years) there are fewer overt manifestations of disease activity and less tendency to deformation of joints. Colloidal gold preparations, in contrast, have little therapeutic effect.

Toxic Effects and Contraindications: Various toxic effects have been reported from chrysotherapy, especially when used in the high dosages of previous years, including exfoliative dermatitis, stomatitis, gastroenteritis, agranulocytosis, thrombocytopenia, aplastic anemia, hepatitis, and, rarely, nephritis. However, the incidence and severity of undesirable reactions have been much reduced by currently advocated techniques, and they are much less frequent than those occurring with the use of the more potent antiphlogistics discussed later. The contraindications to gold therapy are liver disease, blood dyscrasias, current or previous severe skin disorders, ulcerative colitis, disseminated lupus erythematosus, and severe diabetes mellitus.

Technique: A typical dosage schedule is (in terms of the soluble gold salt, given intramuscularly) 10 mgm. the first week, 25 mgm. the second, and then 50 mgm. weekly thereafter until significant benefit is obtained. Once a remission or partial remission has been obtained, the patient can be maintained on 50 mgm. every two to four weeks for an indefinite period, though some physicians prefer to withdraw it for several weeks after each total of 1500 mgm. administered. Many feel that the drug should be discontinued if there is no apparent benefit after the initial 1000 mgm. has been given.

Though gold must be discontinued in about 15% of patients because of untoward reactions, serious toxicity can almost be eliminated by careful respect for the contraindications and by a routine examination on each visit for the detection of untoward symptoms or signs. A complete blood count (including a platelet estimation or clot retraction) and urinalysis should be performed weekly during the early phase of gold therapy and then at intervals of three to four weeks. The patient should be instructed to report promptly any evidence of toxicity. It is safer to omit the drug temporarily when in doubt.

THE STEROIDS

The report of Hench, Kendall, Slocumb and Polley¹ in 1949 of the antirheumatic effect of cortisone and corticotropin marked a new era in the treatment and investigation of the rheumatic diseases. They found that within one to three days following the initiation of systemic steroid therapy in active rheumatoid arthritis there was almost invariably a marked subjective improvement, with decrease in muscular and articular stiffness and soreness. This was followed by distinct objective local and systemic benefits, with diminution in the manifestations of joint inflammation and amelioration of general weakness and fatigue. Many subsequent reports have confirmed these findings, and serial synovial biopsies indicate that there is similar, but less marked, reversal of tissue changes. It has also been shown that abnormalities of the synovial fluid return toward normal during steroid therapy.²

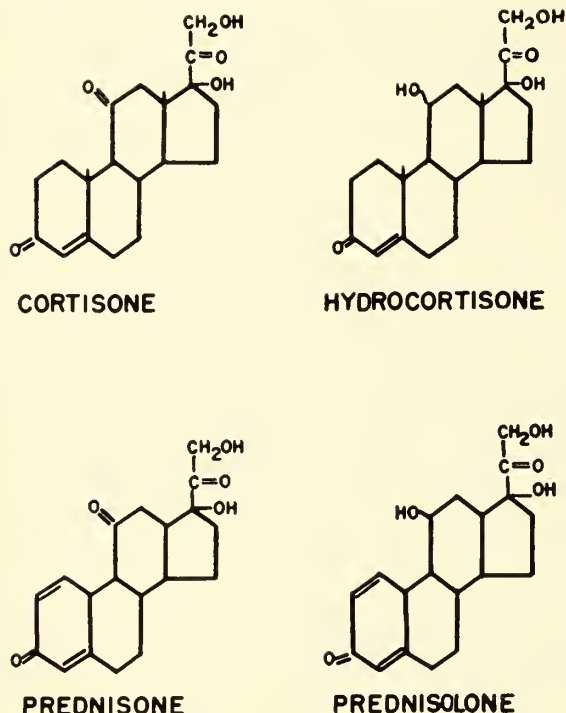
It was soon recognized, of course, that these are not curative agents, and recent controlled studies indicate that after many months of treatment there is actually no demonstrable benefit attributable to the

1. Hench, P. S.; Kendall, E. C.; Slocumb, C. H., and Polley, H. F.: The Effect of a Hormone of the Adrenal Cortex (17-hydroxy-11-dehydrocorticosterone; Compound E) and of Pituitary Adrenocorticotrophic Hormone on Rheumatoid Arthritis, Proc. Staff Meet., Mayo Clin. 24: 181 (Apr.) 1949.

2. Yielding, K. Lemone; Platt, David, and Holley, Howard L.: Studies on the Effects of Hydrocortisone Acetate Injection (Intra-Articular) on the Synovial Fluid in Rheumatoid Arthritis, J. Lab. Clin. Med. In press.

hormones alone.³ Much has been learned, nevertheless, regarding their clinical application as antirheumatic agents, and newer steroids are becoming generally available.

The accompanying figure contains the structural formulas for the steroids now in general use. It will be noted that there are



ANTIPHLOGISTIC STEROIDS

Fig. 1

only minor variations in their molecular configurations. The newer steroids, prednisone and prednisolone, differ from their respective analogues, cortisone and hydrocortisone, only in having a double bond in the delta-one position, i. e., between carbon-one and carbon-two. Despite this, there are important differences in their pharmacologic activity. The only functional difference between the latter two is that hydrocortisone is roughly one and one-half times as potent as cortisone, while their analogues not only are almost four times as potent as hydrocortisone in clinical antirheumatic effect but also have considerably less effect

on body fluids and electrolytes, as will be discussed later.

A suspension of the acetate of hydrocortisone is only about one-seventh as soluble in body fluids as hydrocortisone itself, and, hence, is useful intra-articularly for its relatively prolonged local effect. It is interesting also that the mere addition of a fluorine atom at the carbon-nine position of hydrocortisone markedly enhances its effects. Though the consequent pronounced sodium and water retention precludes the systemic use of this compound (fluorohydrocortisone) for antiphlogistic purposes, it gives further evidence of the promise that the field of molecular chemistry offers in ascribing specific functions to the structural components of the molecule. Thus, it may be that the specific antiphlogistic component will eventually be identified and a preparation without significant side effects synthesized.

At the present time, however, the side effects are still very much with us, and they restrict considerably the clinical application of the steroids. The pendulum has swung from the one extreme of over-optimism and indiscriminate application to the other extreme of disillusionment and almost total rejection of the drugs. It seems to rest now at the position that the steroids are of most value in rheumatoid arthritis when used for specific indications in selected cases.

Indications: Systemic steroid therapy should be reserved for those cases which, despite diligent application of the basic regimen and chrysotherapy, continue to exhibit frankly inflamed joints and relentless progression of disability.

Side Effects and Contraindications: The incidence and severity of untoward effects increase markedly when the dosage of the steroid is increased above a reasonable maintenance level in an attempt to further suppress the disease.

Salt and water retention and potassium diuresis are frequent consequences of treatment with cortisone and hydrocortisone, but occur only with very large doses of their newer analogues. The latter steroids, however, appear to be somewhat more ulcerogenic and diabetogenic than the former, and they cause a higher incidence of ecchymoses and vasomotor symptoms. All of the currently employed steroids can produce hypertrichosis, acneform eruptions,

3. British Med. Research Council and Nuffield Foundation Joint Committee Report on Clinical Trials of Cortisone, ACTH, and Other Therapeutic Measures in Chronic Rheumatic Diseases; a Comparison of Cortisone and Aspirin in the Treatment of Early Cases of Rheumatoid Arthritis, Brit. M. J. 1: 1223-1227, May 1954.

osteoporosis, facial mooning, and (rarely) thrombophlebitis.

The contraindications to steroid therapy are well known and are, for the most part, relative ones. Edema and hypertension constitute relative contraindications to treatment with those steroids that cause significant salt and water retention. However, appropriate measures, such as sodium restriction, usually counteract these effects sufficiently. Other important contraindications to the use of steroids include neuropsychiatric disorders, infections (especially tuberculosis), and peptic ulcer.

Dosage and Technique: Early in the use of antiphlogistic steroids most clinical investigations advised beginning with large "suppressive" dosages and then rapidly decreasing to maintenance levels. A typical schedule was to institute cortisone in doses of 100 mgm. every 8 hours for three doses, then every 12 hours for two doses, then 50 mgm. every 12 hours, and then to gradually reduce the dosage by decrements of 12.5 mgm. over a period of several days until a maintenance dose was established, usually 50 to 62.5 mgm. daily. Many have come to feel that the rapid improvement so induced, often accompanied by considerable euphoria, led to over-optimism on the parts of both the patient and the physician, and it sometimes made it difficult for the patient to appreciate the necessity for accepting less than complete suppression of symptoms over the long time ahead. For this reason many now prefer to institute cortisone in doses of 75 to 100 mgm. daily (for adults), with gradual reduction in dosage to a maintenance level over a period of 10 to 14 days. It is recommended that the daily maintenance dose not exceed 10 mgm. in children, 20 mgm. in adolescents, 37.5 mgm. in women, and 62.5 mgm. in men.

The symptomatic benefits of steroid therapy are very gratifying, but they cannot be maintained indefinitely in the majority of patients. One must remain on the alert for the development of tuberculosis, possibly from a previously occult or quiescent focus. Some physicians advocate the administration of an antituberculous agent, such as isoniazid, to all patients receiving the steroids, but this is not as yet generally accepted. Activation of a peptic ulcer is not uncommon and symptoms may be vague and atypical. The physician must consequently be on guard lest serious hemor-

rhage or even perforation be his first indication. Many prescribe antacid therapy as prophylaxis in all receiving the steroids.

It is almost universally agreed that the risk of complications is too great to justify any attempt to suppress completely the patient's symptoms, unless this can be accomplished with the usual maintenance dosages. After establishing a dose that maintains the patient in reasonable comfort for several weeks, a continual effort must then be made to reduce the dosage by very small decrements, in the hope that a relative remission may be detected and the hormone finally stopped. This often proves to be quite difficult, inasmuch as the withdrawal of, for example, 5 mgm. of cortisone from the daily maintenance level may incite a seemingly disproportionate exacerbation of symptoms. The previous maintenance dose must then be resorted to once more, and another attempt to decrease it made in 4 or 5 weeks. The newer steroid analogues are used similarly but in proportionately lower doses. Salicylates should be used to full advantage with each attempt to withdraw hormonal therapy.

During the time that the patient is enjoying the benefits of steroid therapy, particular attention should be paid to physical therapeutic measures not previously tolerated. Malleable joint contractures can frequently be straightened and wasted muscles restored.

INTRA-ARTICULAR STEROID THERAPY

As mentioned previously, hydrocortisone acetate is a useful antiphlogistic agent when injected intra-articularly in rheumatoid arthritis. Improvement usually occurs within 24 hours and lasts from 2 or 3 days to several weeks, with an average of about 8 to 10 days. Initial studies indicate that newer analogues, including hydrocortisone tertiary-butylacetate, prolong this period of benefit.

Hydrocortisone acetate finds its principal usefulness in patients whose symptoms are confined to a relatively few, frankly inflamed joints. It can be used as an adjunctive measure to any of the systemic therapeutic programs, and is particularly beneficial in facilitating local physical therapy.

The contraindications and side effects mentioned in regard to systemic steroid

therapy do not apply to the local use of hydrocortisone acetate. Untoward reactions are rare, when proper asepsis is practiced, and the only significant contraindication would seem to be the presence of joint infection.

Dosage and Technique: The dose injected varies from 12.5 to 75 mgm., depending upon the size of the joint and previous response to such therapy. This can be repeated as often as results seem to justify.

The technique for entering most joints is a very simple one, and any interested physician should be able to prepare himself for the procedure by a brief review of the anatomy of the particular joint involved. The skin and joint capsule should be infiltrated with 1% or 2% procaine. A good general rule is to enter the joint where it is most fluctuant, when there is palpable synovial effusion. Aspiration of some of the synovial fluid before instilling the medication will itself allay some of the discomfort of a tightly distended joint.

There will be instances, in relatively "dry" joints, when one cannot be certain whether the needle is actually within the synovial cavity, though after some experience the resistance to injection provides a valuable clue. No harm is done, actually, if the medication happens to be injected into adjacent soft tissues, though the therapeutic effect will be less.

PHENYLBUTAZONE

In 1949 favorable reports began to appear from Germany and Switzerland concerning the marked antirheumatic effects of a new synthetic compound, phenylbutazone (Butazolidin^(R)).^{*} Over the past five years it has received considerable laboratory and clinical study in this country.

It is rapidly and completely absorbed by the gastrointestinal tract and is generally administered by this route, though it can be given intramuscularly. Phenylbutazone usually reaches its peak level in the plasma about two hours after oral administration and is slowly but completely metabolized by the body. After institution of therapy, the plasma level gradually increases until a plateau is reached on about the fourth day. If adequate dosage is maintained, phenylbutazone will remain at this level

until it is discontinued, and then gradually disappear over a period of several days.

Indications: Perhaps better known for its beneficial effects in rheumatoid spondylitis and acute gouty arthritis, phenylbutazone has also proved to be of value in active peripheral rheumatoid arthritis. About half of rheumatoid patients receiving this drug derive analgesic and anti-inflammatory effects which compare favorably with those of the steroids. Most of the remaining will experience slight to moderate improvement. The indications for its use do not differ greatly from those for the use of the steroids, namely, frank inflammatory manifestations with rapidly progressive disability that has not responded to the basic program and gold. It should be given only with great caution, however, if gold is to be administered simultaneously, since studies to date have not been adequate to negate the possibility of there being additive toxic effects.

The similarity in the indications for and the antirheumatic effects of phenylbutazone and the steroids preclude their conjunctive use. One or the other should be chosen in a given case, with particular attention to the presence of relative contraindications and to the possibility of undesirable effects. In most patients, but not in all, the steroids will provide the better therapeutic ratio. Phenylbutazone is sometimes used to replace the steroids when their hormonal effects (such as hypertrichosis) have proved troublesome.

Toxic Effects and Contraindications: Various toxic effects have been reported with the use of phenylbutazone, including bone marrow depression, morbilliform rash, stomatitis, nausea, and gastrointestinal hemorrhage (usually from activation of a peptic ulcer). The latter suggests that, as with the steroids, prophylactic antacid management may routinely be in order.

Phenylbutazone causes retention of sodium and water by the kidneys but, unlike cortisone, does not significantly increase potassium excretion. About one-third of the patients develop some degree of edema, though this can usually be avoided, if necessary, by sodium restriction or, occasionally, a mercurial diuretic. An apparent anemia develops in some patients receiving the drug, but this is due to the hemodilution of water retention; there is actually little

^{*}Trade Name—Geigy Pharmaceuticals Corporation.

or no change in the total circulating hemoglobin and red cell mass.

Phenylbutazone is contraindicated in patients with congestive heart failure, significantly elevated blood pressure, serious allergic proclivities, blood dyscrasias, peptic ulcer, or chronic hepatic or renal disease. It should be used only with considerable care in the presence of advanced age or active infection.

Most serious reactions were reported during the early experience with the drug, when unnecessarily high dosage levels were maintained over extended periods. It was later found that there is little difference in the serum level when the daily dosage is reduced from 1600 mgm. to 800 mgm., and therapeutic levels, once established, can usually be maintained by 400 mgm. or less daily. The incidence and severity of toxic reactions have been much reduced by the currently advocated dosage. The same precautionary measures described for chrysotherapy should be followed with the use of phenylbutazone. The patient should be instructed to report immediately if he develops fever, sore throat, or evidence of bleeding, especially from the gastrointestinal tract.

It is necessary to discontinue phenylbutazone in about 15% of patients because of untoward reactions. Except for mild reactions, such as an evanescent rash, nausea or slight dependent edema, the drug should be promptly withdrawn, and, as a rule, not reinstituted.

Dosage: When there are no contraindications, the patient is usually started on 200 mgm., with meals, three or four times daily until there is an adequate therapeutic response. The amount administered should then be reduced to 400 mgm. a day, and the necessary maintenance level determined thereafter by withdrawing 50 mgm. from the daily dosage every third or fourth day. When symptoms begin to return, the last withdrawn decrement is resupplied, and the resulting total considered the temporary maintenance requirement. One hundred to 400 mgm. daily is usually sufficient, the dosage being fairly constant in a given individual. Most investigators feel that the risk of untoward effects is too great to justify the use of higher maintenance dosages. If significant improvement does not occur within the first week of phenyl-

butazone therapy, the drug should be discontinued.

As with the period of diminished symptoms on steroid therapy, full advantage should be taken of physical measures during the course of phenylbutazone treatment. Likewise, a continual effort should be made at intervals to reduce the required maintenance dose, hoping that a spontaneous remission will eventually occur and that the drug can be withdrawn entirely. As a rule, however, recurrence of symptoms soon follows a significant reduction in the established daily dose. With careful supervision some patients have derived benefit from phenylbutazone for many months without apparent harm.

SUMMARY

A brief survey of some of the current concepts of medical treatment of rheumatoid arthritis is presented. Some detail is provided concerning the use of chrysotherapy, steroid therapy (both systemic and intra-articular), and phenylbutazone. It is emphasized that these agents do not replace a basic program of good personal hygiene, adequate nutrition, physical therapy, and the principal medicinal supplement: aspirin.

Old Age Does Not Prevent Gallbladder Surgery—Old age alone does not necessarily prevent early surgical removal of gallstones which may become malignant, a Washington, D. C., surgeon said recently.

The risk of gallbladder surgery is about the same for persons over 60 as for those under 60, provided there are no other complications, Dr. Alec Horwitz said in the July 21 Journal of the American Medical Association. Of 300 consecutive gallbladder operations he performed, 67 were on persons over 60. There were no deaths, even among those with complications.

However, it is wise to eradicate gallbladder disease before old age overtakes the patient and before other diseases and complications occur, even when the gallstones produce no symptoms, Dr. Horwitz said, adding that he doubted if there is such a thing as a "silent" gallstone. Gallbladders with gallstones should be removed before they become "vocal," for when they begin to "shriek with malignant changes" it is often too late, he said.

There is a very great increase in the incidence of cholecystitis, common duct obstruction and cancer of the gallbladder in persons over 60. Delay in surgery must be avoided because the aged person deteriorates rapidly, he said. In acute cholecystitis remedial surgery should be done as soon as the diagnosis is established and the patient is ready for it.

OPERATIVE CHOLANGIOGRAPHIC DEMONSTRATION OF BILIARY TRACT PATHOLOGY

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The performance of any operation without a fairly accurate knowledge of the pathology that is present may result in serious error. This is especially true in biliary tract surgery. X-ray visualization of the gallbladder and intravenous cholangiography are of considerable aid. The latter has the possibility of becoming more valuable as time goes on.

Another aid in demonstrating pathology in and about the biliary ductal system is operative cholangiography. This was used for the first time in 1931. Apparently it did not attract much attention initially but now the literature indicates that it is growing in popularity. Opinions regarding its value vary from a feeling that it should be used routinely to one that it may be more misleading than helpful.

In order that the procedure may be of maximum value, it is not only necessary that adequate equipment be available but, also, that a plan of cooperation between the surgical team and the radiologist be instituted. The method must be used frequently to eliminate, as far as possible, technical error and misleading film interpretation. Without these, operative cholangiography may be of little aid.

Since it frequently cannot be determined before opening the abdomen whether this aid will be useful, it is necessary that arrangements for it be made before every operation involving the biliary system. Unless it is prearranged, an attempt to use the method is time consuming and creates confusion.

INDICATIONS FOR OPERATIVE CHOLANGIOGRAPHY

While operative cholangiography is most frequently an aid in biliary calculus disease, it is also often valuable in such conditions as anomalies of the biliary tract, congenital atresia, and cancer in and about the ducts; and in operative damage to the ductal system and certain diseases of the pancreas.

BILIARY CALCULUS DISEASE

The criteria, as usually given, for open exploration of the common duct in gallstone disease are a gross set of rules. The high incidence of overlooked common duct

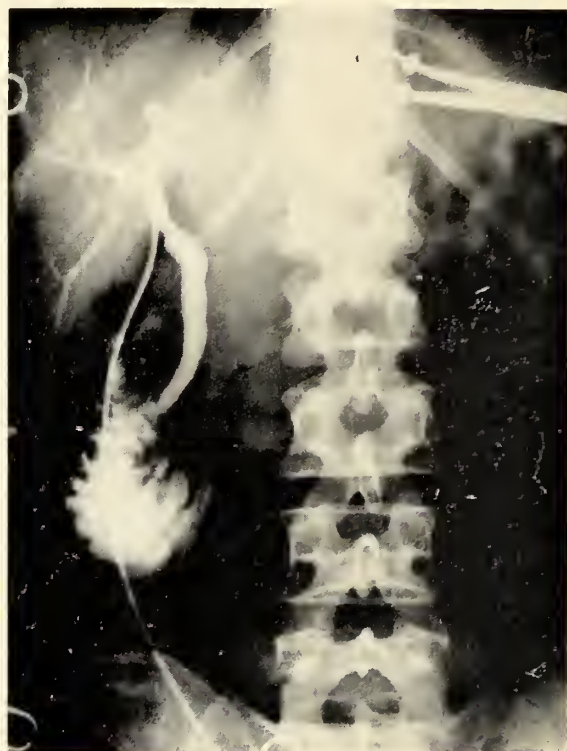


Fig. 1. Normal operative cholangiogram. Note the normal size of the bile ducts and hepatic radicals. There are no filling defects. The contrast medium has entered the duodenum.

stones, with and without choledocotomy, by competent surgeons is evidence of a need for improved methods.

During the last few years many surgeons^{1, 2} have been doing an open exploration of the ducts in from 25 to 50 per cent of their cases. This has decreased considerably their incidence of overlooked stones but has not completely solved the problem. Even when a large percentage of ducts are openly explored it has later been found that stones were present in some of the ducts not opened and they were missed in many of those explored.

Reports from authors^{1, 2} who are doing open exploration on a large number of

1. Best, R. R.: Cholangiographic Demonstration of the Remaining Common Duct Stone and Its Non-Operative Management, *Surg., Gynec. and Obst.* 66: 1040-1046 (June) 1938.

2. Cattell, R. B.: The Use of a Long T-Tube in Surgery of the Biliary Tract, *S. Clin. North America*, (June) 1948, pp. 659-668.



Fig. 2. The ducts are slightly dilated. There is a filling defect in the ampulla of Vater. Two stones were removed from the ampulla.



Fig. 3. Operative cholangiogram made after removing stones and inserting T-tube and before closing abdomen. The ducts are clear of obstruction and contrast medium has gone into duodenum.

ducts indicate that less than half are productive of stones. Even though a carefully done open exploration of the ducts carries very little increase in morbidity, I believe that more can be accomplished by operative cholangiography. On all of our patients who have gallstones we do an operative cholangiogram and depend largely on the film interpretation as to whether open exploration of the ducts will be done. By this method we are doing a smaller number of nonproductive duct explorations and are removing a larger number of stones than we did formerly.

After removing all the stones that can be found and we feel that the ducts are clear, we insert a T-tube and do another cholangiogram while the abdomen is still open. Occasionally our efforts are rewarded and we save the patient another operation.

We have reviewed 200 cases of biliary calculus disease which we treated surgically before beginning the use of operative



Fig. 4. Operative cholangiogram made after attempt at removing all stones. The abdomen had not been closed. A missed stone is seen just below lower limb of T-tube.

cholangiography and found we had removed duct stones in 11 per cent. A review of a like number since the routine use of this method shows a removal rate of 17

per cent. Gilford and Kahlstrom³ found and removed duct stones in 9 per cent of their cases without the use of operative cholangiography, and in 21 per cent when this procedure was routinely used.

ANOMALIES OF THE BILIARY DUCTS

Contrary to the generally accepted opinion, Hicken, Coray and Frantz¹ found that anomalies and anatomic variations of the extrahepatic biliary system occur frequently and at times to such an extent that they created surgical problems. One of the most frequent anomalies pertains to the entrance of the cystic duct into the common. These ducts may parallel each other so closely



Fig. 5. Reparative surgery on operative damage of common duct. Contrast medium injected into small opening showed this to be the distal end of the duct.

that the structure is mistaken for a dilated common duct. The errors usually made when this condition exists are injury to the common duct, opening the cystic duct instead of the common, and leaving a long

3. Gilford, J. H., and Kahlstrom, S. C.: Operative Cholangiography, *West. J. Surg.* 63: 605-606 (Sept.) 1955.

4. Hicken, N. F.; Coray, J. B., and Frantz, B.: Anatomic Variation of the Extrahepatic Biliary System as Seen by Cholangiographic Studies, *Surg., Gynec. & Obst.* 88: 577 (May) 1949.



Fig. 6. Same case as Fig. 5. Contrast medium injected into sinus tract shows this to be the proximal end of the duct.

segment of the cystic duct. These anomalies are readily detected by operative cholangiography.

CONGENITAL ATRESIA OF THE BILE DUCTS

Until recent years congenital atresia of the bile ducts was not considered amenable to any type of treatment. In 1927 Ladd⁵ did the first successful operation for this condition. It is now believed that this type of atresia is operable in about 20 per cent of all babies so affected.

It is quite difficult to adequately explore the ducts in these small infants. Hicken and Crellin⁶ found that the status of the ducts in these patients could be best evaluated by operative cholangiography. The contrast medium can be injected into the gallbladder or any structure in the portal fissure which contains bile. Frequently, valuable information can be obtained by injecting the gallbladder even if it is collapsed or contains only mucus.

5. Ladd, W. E., and Gross, R. E.: *Abdominal Surgery in Infancy and Childhood*, Philadelphia, W. B. Saunders, 1947, p. 260.

6. Hicken, N. F., and Crellin, H. G.: Congenital Atresia of the Extrahepatic Bile Ducts, *Surg., Gynec. & Obst.* 71: 437 (Oct.) 1940.

BILIARY-PANCREATIC CANCER

X-ray visualization of the bile ducts on the operating table is frequently of value in cancer of the ducts and pancreas. Doubilet and Sage⁷ were able to diagnose cancer at the ampulla and also in the common hepatic duct by this method. We were en-



Fig. 7. Operative cholangiogram visualizing pancreatic duct.

abled to carry out with more certainty a palliative procedure for a patient with carcinoma in the region of the portal fissure and another with cancer of the common hepatic duct by the use of operative cholangiograms.

OPERATIVE DAMAGE TO THE BILE DUCTS

The difficulties of reparative surgery on the biliary ducts are frequently increased by dense adhesions. In this condition we have found that orientation is facilitated by x-ray visualization of the ducts and we are able to find the damaged area more readily without running the risk of further injury. Mehn⁸ was able to determine the relationship of a fistulous tract to the bile

ducts by x-ray after injecting the tract with a contrast medium.

PANCREATIC DISEASE

Studies indicate⁹ that in 95 per cent of cases the bile and main pancreatic ducts share a common opening into the duodenum. With this anatomical situation it is obvious that bile can easily regurgitate into the pancreatic duct. This is especially true if there is an obstruction at or near the papilla of Vater. An obstruction may result from a stone in the ampulla, or fibrosis or spasm of the sphincter of Oddi. It is postulated that this regurgitation frequently provokes recurrent pancreatitis.

In their study of pancreatitis, Doubilet and Mulholland¹⁰ used operative cholangiography to demonstrate obstruction, and in an attempt to visualize the pancreatic duct, before doing sphincterotomy.

EQUIPMENT

To do operative cholangiography it is necessary that certain equipment be available. We have found the following to be satisfactory:

- Shock proof portable 30 Ma. x-ray unit,
- Portable Potter-Bucky diaphragm,
- At least 2 10x12 inch cassettes,
- Two 10 cc. syringes,
- One or more 21-gauge needles,
- One No. 5 ureteral catheter,
- One 12 inch length of latex tube with needle and syringe adapters, and
- Twenty cc. of contrast medium.

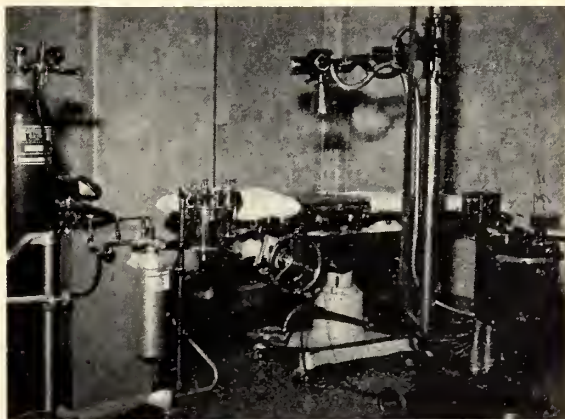


Fig. 8. Operating room arranged for operative cholangiography. Note portable Bucky diaphragm and padding on operating table.

7. Doubilet, H., and Sage, H. H.: Diagnosis of Biliary-Pancreatic Cancer, *S. Clin. North America*, (April) 1953, pp. 461-478.

8. Mehn, W. H.: Operating Room Cholangiography, *S. Clin. North America*, (Feb.) 1954, pp. 151-158.

9. Bartlett, L. C., and Thorlakson, P. H. T.: The Etiology and Technique of Surgical Management of Pancreatic Fistula, *Surg., Gynec. & Obst.* 102: 413-419 (April) 1956.

10. Doubilet, H., and Mulholland, J. H.: Eight-Year Study of Pancreatitis and Sphincterotomy, *J. A. M. A.* 160: 521-528 (Feb. 18) 1956.

Some feel that a 30 Ma. x-ray unit is not strong enough. We believe this lack of power is compensated for by using a Bucky diaphragm.

Various contrast media such as Diodrast, Skiodan Sodium, Lipiodol and others have been used. Mirizzi¹¹ uses Lipiodol. It is the general opinion that media containing oil are difficult to inject and their density tends to obscure small stones. We use two-thirds strength 35 per cent Diodrast and in our hands it is satisfactory. We are now adding to the Diodrast a few drops of methylene blue solution so that any leak in the injecting system can be readily detected.

TECHNIC

The portable Bucky grid is placed on the operating table so that it will be beneath the biliary system. The table is padded to make it comfortable. The patient is adjusted on the table so that the center of the Bucky grid is on a line 2 inches below the tip of the ensiform. It is necessary to rotate the patient about 10 degrees to the right so that the image of the common duct will not be obscured by that of the spine. This position can be maintained by placing a folded sheet beneath the left side of the back.

Any type of anesthesia suitable for biliary tract surgery is satisfactory. In the past we used spinal anesthesia almost exclusively but recently have been using endotracheal anesthesia. It is necessary at the time films are being made that all respiratory movements be stopped.

The abdomen is opened. The cystic duct and artery and junction of the cystic and common ducts are dissected so they can be clearly seen. At this point we decide whether or not the gallbladder is to be removed. If we are sure it will be necessary to remove the gallbladder, the cystic artery is ligated and divided. A ligature is placed on the cystic duct as close to the gallbladder as possible. The cystic duct is partly divided below the ligature and a No. 5 ureteral catheter is inserted through the cystic into the common duct for a distance of 1 or 2 cm. A ligature is placed around the cystic duct below the point of insertion of the catheter. A 10 cc. syringe containing the contrast medium is attached to the catheter and suction is made. Usually bile

will come into the syringe. Three cubic centimeters of contrast medium are injected being careful not to inject air. Air bubbles in the ducts may be mistaken for stones. The first film is then made. We believe that small stones may be obscured by the medium if a large amount is injected. After the first film is made the cassette is removed and another put in place. Five to 10 cubic centimeters more of the medium are injected and the second film made. The larger amount used for the second film will fill the hepatic radicals and some will go into the duodenum if there is not a complete obstruction. A few minutes of time can be saved if the gallbladder is removed while the films are being developed.

If it is not certain the gallbladder is to be removed, we inject the contrast medium directly into the common duct, using a 10 cc. syringe attached to a 21-gauge needle by a length of latex tubing.

When the films are developed they are studied by the radiologist and surgeon. Further steps in the operation depend upon the interpretation of the films.

In all cases in which the common duct has been openly explored, and whether or not stones have been removed, another cholangiogram is made by introducing the contrast medium through the T-tube.

The abdominal incision should not be closed until the x-ray studies show the duct to be clear.

SUMMARY AND CONCLUSIONS

Operative cholangiography is a valuable aid in demonstrating pathology when surgery is being done on and about the biliary system.

It is most useful in biliary calculus disease, anomalies of the biliary tract, congenital atresia, cancer in and about the ducts, operative damage to the ductal system, and certain diseases of the pancreas.

In order that the maximum benefit from operative cholangiography may be obtained, it is necessary that a plan of co-operation be arranged between the surgical team and the radiologist and that the method be used frequently to eliminate, as far as possible, technical error and misleading film interpretation.

While this procedure has been very helpful in our biliary tract surgery we do not consider it infallible and its use should in no way compromise surgical judgment.

11. Mirizzi, P. L.: *Operative Cholangiography*, Surg., Gynec. & Obst. 65: 702-710 (Nov.) 1937.

Pregnancy Does Not Adversely Affect Tuberculosis—Pulmonary tuberculosis is not complicated by pregnancy and should not be considered a reason for ending the pregnancy, according to two Philadelphia physicians.

Drs. Loren M. Rosenbach and Columbus R. Gangemi said in the July 14 Journal of the American Medical Association that if the disease gets worse during or immediately after pregnancy, it is not due to pregnancy but simply to "the tendency of tuberculosis itself to progress."

The relationship of tuberculosis and pregnancy has long been controversial, they said. For more than 70 years termination of the pregnancy was recommended. However, for the last 30 years the idea that pregnancy does not affect the disease favorably or unfavorably has been gaining support.

They studied the records of 152 tuberculous women who had 241 pregnancies over a 30-year period and found no change in the condition of 90.5 per cent of the women during or after pregnancy. Of the 241 pregnancies 23 cases became worse and 19 improved during the pregnancy or in the year following. Unfavorable changes occurred most frequently in moderately or far advanced cases and especially among patients who failed to follow medical advice. None of the patients who had inactive cases of tuberculosis showed any change in their state. All fluctuations—improvement or relapse—occurred in active cases of tuberculosis.

There were 19 cases of therapeutic abortion—the termination of the pregnancy for the good of the mother's health—during the 30-year period. Four patients who refused to follow medical advice became worse during the subsequent year, as did three of 11 women who did not undergo the recommended therapeutic abortions. These three also refused to follow medical advice. The authors commented, "Although the numbers were small, these figures indicate no medical benefit from therapeutic abortion."

The women, patients at the Henry Phipps Institute of the University of Pennsylvania, all lived in a highly overcrowded slum area which has the highest rate of tuberculosis in Philadelphia.

Among 101 early cases of tuberculosis, four patients became worse and five improved during or after their pregnancies. Of 109 moderately advanced cases, 11 showed progression of the disease and 10 showed improvement. All 10 patients who improved followed medical advice, while nine of the 11 patients with progressive worsening did not. Among 31 advanced cases, eight became worse and four improved. All but one of the patients with progressive cases refused medical advice, while those improving were under proper medical care, the authors said.

They concluded that with adequate and proper present-day care of tuberculosis, "pregnancy should not be considered a complication nor should it be looked upon with concern as a cause of progression of the disease."

Smoking Test May Reveal Coronary Disease—A laboratory test which measures the effect of cigaret smoking on the heart's pumping action has been suggested as a possible way of finding otherwise unnoticed heart disease.

Capt. Murray Strober (MC), U. S. A. F. R., discussed the ballistocardiograph and Dock cigaret smoking test for diagnosing coronary artery disease, in the July 14 Journal of the American Medical Association. The ballistocardiograph—which measures the impact on the body of the heart's thrust as it pumps blood—frequently indicates heart abnormalities even when other circulatory tests are negative.

Previous studies had shown that smoking before a ballistocardiogram produced nine times as many abnormal results among coronary disease patients as among normal persons.

Capt. Strober said his study, done at the Smoky Hill Air Force Base, Salina, Kan., confirms the connection between smoking and abnormal ballistocardiograph results. He said there is no clear explanation for this, but there is a definite relation between ballistocardiograph abnormalities and coronary artery disease.

The vast majority of 2,736 airmen had normal tracings after smoking. However, abnormal tracings increased 30 times in persons between 30 and 60 years of age. Abnormal responses showed up in overweight individuals both before and after smoking, and regardless of age.

Not one ballistocardiogram showed any improvement after smoking. Prior to smoking there were 35 abnormal tracings among 2,265. After smoking 85 of 1,725 tracings were abnormal.

The ballistocardiogram has been of value in industrial medicine, he said. Some employers have made this a part of the routine study of employees or those entrusted with tasks where sudden illness might endanger many lives. Part of the reason for the Air Force study was to see if the test could detect asymptomatic coronary disease in persons engaged in the hazardous duties of flying at enormous speeds in high altitudes.

The addition of the Dock cigaret smoking test may make screening surveys more accurate, Capt. Strober said. It is unlikely that the test will detect all cases of asymptomatic coronary disease, but it may find cases that are not detectable by other available means. The ballistocardiogram is not intended to replace a careful physical history, complete physical examination or established methods of cardiac study, he said. Instead the test, which is rapid, efficient and economical, is intended to give the physician additional information about the mechanical pumping action of the heart.

Capt. Strober said that a long-term follow-up study will deal with the men who had abnormal tracings before smoking and those who responded to smoking. Perhaps in those men who later have acute heart disorders characteristic patterns may be found by reviewing their survey records, he said.

Dr. Strober is now at the State University of New York College of Medicine at New York City.

THE JOURNAL

of the

Medical Association of the State of Alabama

Editor-in-Chief

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

Office of Publication

17 Molton Building Montgomery, Ala.

Subscription Price \$3.00 Per Year

August 1956

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STEROID THERAPY OF RHEUMATOID ARTHRITIS

There has been recently an increasing realization of the social and economic implications of the rheumatic diseases in our population. It is estimated that at least one in every twenty persons in the United States is suffering from some type of these diseases, and of this number about 5,000,000 have rheumatoid arthritis. The economic loss is almost astronomical; they are the most common causes of protractive illness. Therefore, the management of this disease syndrome assumes increasing importance.

Elsewhere in this Journal is a treatise on the present concept of the therapy of rheumatoid arthritis. It will be noted that the steroids, such as cortisone and prednisone and their analogues, are not recommended in the routine treatment of this disease. It is known that only about 75 per cent obtain satisfactory relief from symptoms, and 15 to 25 per cent suffer undesirable side effects enough to cause discontinuance of the drug. Some investigators believe that less than 25 per cent of patients can be maintained in satisfactory remission for two years or more with these compounds. Ironically, this reported number appears to decrease annually, regardless of the present excessive demand for these drugs. Even when these drugs are used it must not be assumed that the basic problems in the management of this disease state are solved.

That these drugs are not curative has been well demonstrated, and undesirable physiological side effects occur with prednisone and prednisolone, as with the old preparations. The pathological process is frequently not terminated by administration of the drugs as serial x-ray examination reveals progression of the joint lesion, even though symptomatic improvement continues.

It cannot be over-emphasized that salicylates, especially aspirin, remain the most important drugs in the treatment of this disease state. This fact has recently received added emphasis by the report of the British investigators, which showed that there was no appreciable difference between cortisone and aspirin in relieving symptoms or influencing the natural course of early rheumatoid arthritis.

Notwithstanding all the new drugs which have been introduced in the treatment of

this chronic disease state, the time tested conservative measures, such as local and general rest, prevention and corrective deformities and physiotherapy, avoidance of emotional stress and proper nutrition

should not be neglected. It has long been recognized that improvement in the disease or even arrest of the pathological process may result from these measures alone.

Howard L. Holley

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THE PUBLIC'S OPINION OF DOCTORS— PART II

W. A. Dozier, Jr.
Executive Secretary

This is the second in a series dealing with the public opinion survey sponsored by the American Medical Association. As was the case in Part I, this article will give a portion of the news release from the A. M. A. Some of the more detailed findings of the survey follow.

The 2,462 interviewees who said they have a personal physician were given true-false statements referring to their own doctors. Then all 3,000 interviewees were given the same set of questions to answer regarding "other" doctors. While 23 per cent was the largest proportion answering "true" to any complaint listed about their own doctor, 60 per cent was the largest in evaluating complaints about doctors in general. This difference in attitude can be seen by some of their answers:

—Doctors don't give patients as much time as patients would like: about "other" doctors, 60 per cent say "true"; about "my" doctor, 18 per cent true.

—Most doctors try to hide other doctors' mistakes: 54 per cent true (not asked about personal physicians).

—Doctors are hard to reach for emergency calls: other doctors, 51 per cent true; my doctor, 19 per cent.

—Doctors are not frank enough: other doctors, 46 per cent true; my doctor, 15 per cent.

—They charge too much: other doctors, 43 per cent true; my doctor, 16 per cent.

—They think they are always right: other doctors, 43 per cent true; my doctor, 23 per cent.

—They keep people waiting too long:

other doctors, 41 per cent true; my doctor, 15 per cent.

—They don't have enough personal interest in patients: other doctors, 39 per cent true; my doctor, 11 per cent.

—Their charges have gone up faster than other living costs: other doctors, 35 per cent true; my doctor, 13 per cent. These figures were about the same for the statement that doctors make too much money compared to their patients.

The public does have a realistic idea of the number of years of training required to practice medicine. The most common answer, given by 28 per cent, is eight years; the next most common, 10. Seven years is the shortest period mentioned, and 19 per cent say 11 years or more.

According to the largest number (26 per cent), doctors never retire. Twenty-one per cent give 65-69 years as average retirement age, while other answers vary from 60 to "75 years or older." Only six per cent say doctors retire before 60. However, rural farm dwellers, people over 55, and professional people, in much larger proportions than the general public, say doctors work their entire lives.

The public's median estimate of their own doctor's work week is 64 hours, with 12½ per cent of this time given to charity work; 63 hours and 12 per cent is the public estimate for doctors in general. This is usually close to the doctors' own estimates: 62½ hours and 13 per cent charity.

Doctors are more critical of themselves than are their patients; their agreement that some of the listed complaints are true ranges as much as 20 per cent above the public's.

They agree closely with the public on estimates of their capability, intelligence, and willingness to accept medical advances

and feel most appreciated for competence, sincerity, and healing abilities. They are quicker than their patients to agree that they do not give as much time as they would like and on lack of availability for emergencies.

About half of the public but only a fifth of the doctors think there are not enough doctors in the United States. However, only nine per cent of the public blame this on the medical profession (or A. M. A.). Forty-five per cent say the profession itself encourages young people to become doctors.

People apparently do not form their opinions of doctors in general from knowledge of the doctors' professional organization, the A. M. A., since only half of them say they have any knowledge of it. Those who do chiefly remember general publicity, drug researches, professional standards, conventions, and opposition to government medicine. About a fifth of those who know the A. M. A. remember anything specific about it.

Predominately favorable attitudes are held by people familiar with the A. M. A.; 43 per cent say their opinion is "all good," 26 per cent that it is "more good than bad," 13 per cent "about equal," four per cent "more bad than good," and one per cent "all bad."

One-fourth of those who know the A. M. A.—and about half of the doctors—believe it is run by minority rule, but few object to this; 69 per cent of those who know the A. M. A. and 77 per cent of the doctors say the organization's policies are what doctors in general want.

Most of these people say the A. M. A. exercises the right amount of control over physicians and is not "prejudiced" against any particular type of person or doctor (except a few who mention osteopaths and chiropractors). Most people also approve of the strictness of A. M. A. standards for medical schools and hospitals.

Neither public nor doctors are very critical of the A. M. A.'s political activities. One-fourth of the public and half the doctors say this activity is "about the right amount"; 15 per cent of the public and 16 per cent of doctors that it is "too much"; four per cent of the public and 19 per cent of the doctors that it is not enough.

With few exceptions, the findings about the total public apply also to subgroups: men and women, young and old, white and blue collar, and geographically different

groups. Some minor differences, tending to be less favorable, are seen in people over 65, non-whites, southerners, low-income groups, non-high-school educated persons, and those without personal physicians. Interestingly, the percentage differences in opinion between union and non-union persons are almost indistinguishable.

Paralyzed Polio Patients Safely Undergo Surgery—Paralyzed polio victims who are dependent on mechanical respirators may undergo "practically any" surgical procedure with little more risk than the normal individual, provided they receive special care and preparation, according to three Michigan physicians.

Drs. Thad H. Joos, Norman S. Talner and James L. Wilson of the University of Michigan School of Medicine Poliomyelitis Respirator Center reported on 17 paralyzed patients who safely underwent various types of surgery. None developed any respiratory complications, which might have been expected in such a group, the doctors said.

The 17 patients, who ranged in age from 16 to 35 years, underwent a total of 21 operations between January 1952, and December 1955. Fourteen of the operations were major and seven were minor. The operations were performed from six months to eight years after onset of the disease.

The doctors said in the July 7 Journal of the American Medical Association that medical preparation of the paralyzed patient for surgery is similar to that used in any normal person, except that the patient is sent to the operating room in a chest respirator.

The psychological preparation is, however, "another story." The paralyzed patient must be reassured that his breathing will not stop during surgery and that others have undergone the operation successfully. He should be accompanied to the operating room by someone he knows and trusts. A preoperative visit by the anesthesiologist has been of "inestimable value" in the preparation of their patients, the authors said.

Standard anesthetics were used during the 21 operations. With a general anesthesia a throat tube was employed which gave them control of breathing and allowed the patients to breathe easily during surgery and until they were placed in a "tank" respirator after surgery.

The anesthesiologist accompanied the patients to their rooms after surgery to control their respiration. Most of the patients needed help in the form of a tank respirator during the first 12 to 16 hours following surgery. Patients who had abdominal incisions needed the tank respirator longer since the chest respirator caused pain in the incision for the first 10 to 12 days. The rocking bed was used successfully by these patients between the third and seventh postoperative days. All of the patients returned to their preoperative breathing schedule within 20 days.

The authors concluded that impaired respiratory function should not be considered as an impediment to any surgical procedure ordinarily considered necessary.

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CHANGING ATTITUDES ON PROBLEM DRINKING

Contributed by

Nadine Pitts, Director

Division of Public Health Education

Americans and citizens of other nations as well are fortunate today in the health benefits deriving from tremendous medical advances. In fact, so "fast and furious" has been the pace at which new developments have been made and announced that there is a tendency toward impatience. It sometimes seems difficult to face the realities, that some diseases have not yet been conquered, that the answers to all health questions may not be forthcoming immediately. Moreover, there often is still another tendency—to emphasize new drugs and new methods and to overlook partially or completely other important aspects of disease and recovery. Among these other vital factors are the application of new knowledge and the importance of attitudes—those of victims and of families—toward certain diseases in particular.

The title of a recent Public Affairs Pamphlet indicates the importance of attitudes where one disease is concerned. Many people have made major changes in the way they look at and live with this disease, and the pamphlet title proclaims the results: "Epilepsy—The Ghost Is Out Of The Closet." Of course, not all the ignorance, superstition and fear surrounding epileptic seizures have been rolled away. But fewer people than formerly consider the ailment a shameful one, or relegate the victim to a solitary life in a back room of the home because of this feeling. In short, many people today are developing healthier attitudes toward the disease. And these more desirable attitudes, in turn, are enabling doctors to use effectively their knowledge of diagnosis and control of seizures.

In much the same way, people's attitudes are slowly but certainly changing about still another condition. That condition or

disease is alcoholism. The medical definition of the alcoholic distinguishes him from the social drinker. Generally, the person whose drinking harmfully and definitely interferes with one or more of his important life activities is considered an alcoholic. Within this general framework, alcoholism may be of several types and forms.

There was a time when the "bum" and "hopeless drunk" tags were pinned indiscriminately on the person who drank an excessive amount of alcoholic beverage frequently or routinely. And even today, of course, there are some who believe that the problem drinker cannot be helped, and that he must be left to travel the inevitable path his drinking carves out for him. The "pattern of troubles" is a rather typical one. The alcoholic has difficulties at the office, at home and in the community. He may lose time from work, and his absenteeism may often cost him his job. Moreover, the individual's relations with members of his family and with others usually suffer directly from his drinking.

But even with all the problems alcoholism brings, many people began to ask themselves the question, "Is the problem drinker really a bum, and hopeless?" And the answers that were and are forthcoming raised considerable doubts that he deserves to be forgotten. An editorial in a recent issue of the *Journal of the American Medical Association* (for May 5, 1956) points out that problem drinkers are usually good workers when sober, and that they get satisfaction from jobs well done, rather than from any financial reward. And from other sources, from surveys and studies, comes more information about problem drinkers. There are an estimated 4,500,000 problem drinkers in the United States alone. No state or group, it appears, is free of alcoholism. Rather, problem drinkers represent a cross section of the entire population. Approximately 50,000 persons with this problem live in Alabama. Moreover, many problem drinkers are intelligent, and they are among the community and social leader group.

Consideration of alcoholism as a disease

has served a useful purpose, according to the editorial in the *Journal of the American Medical Association* we mentioned earlier. Attention has thereby been focused on the need of the problem drinker for constructive assistance, for rehabilitation. At the same time, the editorial questions whether too much emphasis on the problem as an illness might not be a disservice to the problem drinker, if it allows him to rationalize his condition to others.

A greater understanding of alcohol's effects, some of the characteristics of the persons who are addicted to it and their needs can perhaps pave the way for more widespread rehabilitation of this group.

Alcohol, first of all, acts as a stimulant or excitant. This fact is generally known, but not so the narcotic and depressant action which follows the stimulation. In depressing the higher brain centers, alcohol impairs or removes temporarily the power of judgment. One writer has described its action on the nervous system from "above downward" as alcohol's chief property. Also, high concentrations of alcoholic beverages irritate to a degree some of the body tissues with which they come in contact. Irritation of stomach tissue is one example. Further, other conditions are associated with excess alcohol intake. Severe malnutrition is one malady suffered by many alcoholics or problem drinkers because they neglect to eat. A close relationship between liver conditions and malfunctions and alcoholism has been observed. The possible effects of the substance on the adrenal glands are being studied.

A comatose or unconscious state is described as a challenge to the doctor, and it is interesting that alcoholism is a factor in about three out of five cases of coma.

What distinguishes the alcoholic from the temporary, occasional or nondrinker? The *Journal of the American Medical Association* editorial, referred to earlier, quotes one student of the problem who states that problem drinkers have one characteristic in common. That trait is the inability to face failure even in little things. Elaborating on this, the editorial continues: "... They (problem drinkers) tend to place the blame for their failures on others; they dream of a brighter future and use alcohol as a means of escaping from an intolerable present. . ."

Does the problem drinker recognize the degree to which he depends on alcohol? Ob-

viously not in all cases, for our editorial quotes still another writer, to the effect that few alcoholics realize how completely they lack the ability to face a life without alcohol.

Addiction to alcohol, then, is usually compulsive and progressive, unless rehabilitation intervenes. Certain warning signs of the disease are seen in industry. The victim may be increasingly absent from his post, on the first day of the week, after payday or after a holiday.

Our editorial source points to the needs of the alcoholic which should be understood so that cooperation in rehabilitation can be obtained. Physically, he may have an organic disease which aggravates his addiction to liquor. An example of this might be the drinker who indulges frequently to relieve physical pain. A thorough examination of the alcoholic is important, as well as the full case history. On the psychological level, for example, the person's prealcoholic personality will need to be determined. If the victim appeared well-adjusted before the onset of his addiction, the outlook is usually good. The same holds true if he previously suffered from relatively minor emotional difficulties, according to the *Journal* editorial. However, if the victim showed or shows signs of a more serious emotional disorder, the outlook for success in treatment might be poor. Unsuccessful work, on the whole, with this latter group gives rise to the belief that the alcoholic is "hopeless."

Environmentally, the alcoholic's needs revolve around the family. Our *Journal* editorial tells us that "families must learn to avoid nagging, suspicion, and distrust." In an article in a recent issue of *Today's Health* (for January 1956), the author recounts part of her life with an alcoholic husband. She relates that she "endured so much, . . . fought so hard to save him, doing all the wrong things. . ." This woman's behavior was typical, according to an executive of the National Committee on Alcoholism. Here is what that official had to say about the families of problem drinkers:

"Great strides are being made these days in the treatment of alcoholics by almost everyone except those who care the most—their friends and families. And yet they try so hard to help. Even when they berate the loudest, it's because they care so much;

because their hopes are so high, their suffering so poignant. It is tragic that the more they try to help, the less they seem able to do."

Returning to the *Journal* editorial's catalog of the alcoholic's needs, social level is dealt with also, along with the physical, psychological and environmental needs. The need in this area is membership in a group of people like himself. One explanation of this need is that the problem drinker who undergoes rehabilitation can never again drink "socially." Medical science does not yet know why this is so, although some change in cell tissue or spinal fluid is suspected as the reason. One physician told the 1955 Alabama Conference of Social Work that "Experience has proven that once a person's drinking has crossed the line into pathological drinking, he can never 'handle alcohol' again. He can re-integrate his personality and sometimes achieve more than in the early, 'social drinking' days, but he must be a total permanent abstainer. . ."

There is an organization of worldwide renown that can fill the alcoholic's need for friends, like him, who understand the problem with which he has to live. Its name is Alcoholics Anonymous, and there are chapters in most medium-sized and large communities. As the name implies, members of the group are known usually only to each other by name. In its early existence, the group insisted that a newcomer admit he was a victim of alcoholism. Now, however, in some chapters at least, the prospective new member need only admit that he suspects he is an alcoholic, and that he needs help with his problem.

Alcoholics Anonymous, as well as Alanon—the family group associated with it—appears effective. The group estimates that good results are obtained in about 60 per cent of the persons who seek its help. However, the group is able to reach only an estimated three per cent of the nation's problem drinkers.

As we pointed out earlier, the alcoholic cannot be cured, so one goal is uppermost in treatment. Some drugs have been useful in breaking alcohol's grip temporarily, but the danger of relapse is ever-present. Therefore, treatment is usually long range, and designed to help the problem drinker live with himself and others without using alcohol in any form. Group therapy, similar

in some respects to Alcoholics Anonymous, has achieved good results in some areas.

Acting on the premise that the alcoholic does not voluntarily choose the "road to ruin," many states and industries have established rehabilitation programs. Alabama carries on an educational program to combat the disease. Spearheading these educational efforts are the State Commission on Education with Respect to Alcoholism, and the State Departments of Health and Education, among others.

The losses associated with problem drinking have been described as preventable. Perhaps more and more such losses can be prevented when communities recognize that the alcoholic is both acutely and chronically ill, and that he needs help.

AMA Exhibits For Local Health Fairs—Health fairs sponsored by local medical societies have proven their worth as a primary means of spreading authentic health information as well as good public relations for the medical profession. Climbing on the health fair bandwagon in the coming months are the Chicago Medical Society in cooperation with the local Junior Chamber of Commerce (October 13-21); Academy of Medicine of Cincinnati (February 28 to March 5), and the District of Columbia Medical Society (dates not set).

At these health fairs, many American Medical Association exhibits will be displayed, augmented by exhibits from voluntary health agencies, state and local health departments, government agencies and other interested groups.

One of the most popular of the Bureau of Exhibits' newer displays depicts the story of human development from conception through delivery. Entitled "Life Begins," this exhibit has been duplicated so that more bookings can be arranged in the busy summer and fall months of health fairs, home shows and state and county fairs. This exhibit is unique in that a series of 12 human features are embedded in solid clear plastic for purposes of preservation and to make shipping easier.

Further details on this exhibit or others suitable for the general public may be secured from the Bureau of Exhibits, American Medical Association.

NEXT ANNUAL SESSION
OF THE ASSOCIATION
MOBILE

APRIL 18, 19, 20, 1957

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

April 1956

Examinations for diphtheria bacilli and Vincent's	87
Agglutination tests	750
Typhoid cultures (blood, feces and urine) ..	598
Brucella cultures	9
Examinations for malaria	81
Examinations for intestinal parasites	2,732
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	22,999
Examinations for gonococci	1,325
Examinations for tubercle bacilli	3,714
Examinations for Negri bodies	144
Water examinations	1,847
Milk and dairy products examinations	4,603
Miscellaneous examinations	517
Total	39,407

* * *

May 1956

Examinations for diphtheria bacilli and Vincent's	95
Agglutination tests	933
Typhoid cultures (blood, feces and urine) ..	820
Brucella cultures	7
Examinations for malaria	105
Examinations for intestinal parasites	3,730
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	26,884
Examinations for gonococci	1,578
Examinations for tubercle bacilli	3,754
Examinations for Negri bodies	125
Water examinations	1,967
Milk and dairy products examinations	5,432
Miscellaneous examinations	460
Total	45,893

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	Mar.	Apr.	E. E.* Apr.
Typhoid and paratyphoid	1	1	5
Undulant fever	0	0	2
Meningitis	7	4	9
Scarlet fever	274	298	33
Whooping cough	54	69	97
Diphtheria	12	2	15
Tetanus	0	0	1
Tuberculosis	203	129	228
Tularemia	0	1	2
Amebic dysentery	2	3	5
Malaria	1	0	5
Influenza	796	1048	981
Smallpox	0	0	0
Measles	761	1153	500
Poliomyelitis	0	1	3
Encephalitis	4	1	1
Chickenpox	396	203	332
Typhus fever	1	0	4
Mumps	615	817	226
Cancer	338	324	342
Pellagra	0	0	2
Pneumonia	244	260	318
Syphilis	156	137	279
Chancroid	1	6	8
Gonorrhea	365	338	441
Rabies—Human cases	0	0	0
Positive animal heads	46	47	0

* * *

	Apr.	May	E. E.* May
Typhoid and paratyphoid	1	1	4
Undulant fever	0	2	2
Meningitis	4	12	10
Scarlet fever	298	339	28
Whooping cough	69	224	162
Diphtheria	2	1	9
Tetanus	0	2	4
Tuberculosis	129	173	275
Tularemia	1	0	1
Amebic dysentery	3	1	1
Malaria	0	0	4
Influenza	1048	328	232
Smallpox	0	0	0
Measles	1153	2019	972
Poliomyelitis	1	3	7
Encephalitis	1	4	2
Chickenpox	203	171	247
Typhus fever	0	0	5
Mumps	817	743	185
Cancer	324	302	423
Pellagra	0	0	0
Pneumonia	260	130	197
Syphilis	137	127	331
Chancroid	6	6	12
Gonorrhea	338	374	416
Rabies—Human cases	0	0	0
Positive animal heads	47	32	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR FEBRUARY, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During February 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births.....	6685	3978	2707	25.8	25.8	24.4
Deaths.....	2097	1316	781	8.1	8.8	8.3
Fetal deaths.....	135	46	89	19.8	17.6	22.0
Infant deaths— under one month.....	134	70	64	20.0	17.8	20.6
under one year.....	205	92	113	30.7	30.1	32.6
Cause of Death						
Tuberculosis, 001-019.....	34	12	22	13.1	11.7	12.6
Syphilis, 020-029.....	3		3	1.2	2.8	2.8
Dysentery, 045-048.....	1	1		0.4		1.2
Diphtheria, 055.....	2	1	1	0.8	0.4	0.4
Whooping cough, 056.....					1.2	
Meningococcal infections, 057.....					1.2	0.4
Poliomyelitis, 080, 081.....						0.4
Measles, 085.....					0.4	0.4
Malignant neoplasms, 140-205.....	267	199	68	102.9	95.3	94.8
Diabetes mellitus, 260.....	24	16	8	9.2	10.9	8.1
Pellagra, 281.....						1.2
Vascular lesions of central nervous system, 330-334.....	271	168	103	104.5	113.1	115.5
Rheumatic fever, 400- 402.....	7	5	2	2.7	2.4	2.4
Diseases of the heart, 410-443.....	693	482	211	267.1	284.0	257.9
Hypertension with heart disease, 440- 443.....	136	70	66	52.4	62.4	52.1
Diseases of the arteries, 450-456.....	56	34	22	21.6	16.5	13.4
Influenza, 480-483.....	13	8	5	5.0	15.7	10.6
Pneumonia, all forms, 490-493.....	71	35	36	27.4	38.6	31.7
Bronchitis, 500-502.....	6	6		2.3	2.0	1.6
Appendicitis, 550-553.....	2		2	0.8	1.2	0.4
Intestinal obstruction and hernia, 560, 561, 570.....	5	3	2	1.9	2.8	2.8
Gastro-enteritis and colitis, under 2, 571.0, 764.....	9		9	3.5	2.8	4.9
Cirrhosis of liver, 581.....	11	7	4	4.2	4.4	4.1
Diseases of pregnancy and childbirth, 640- 689.....	7	3	4	10.3	4.6	14.6
Congenital malforma- tions, 750-759.....	18	12	6	2.7	4.2	4.0
Accidents, total, 800- 962.....	137	98	39	52.8	58.3	68.3
Motor vehicle acci- dents, 810-835, 960.....	66	54	12	25.4	22.1	32.5
All other defined causes.....	382	204	178	147.2	157.3	141.6
Ill-defined and un- known causes, 780- 793, 795.....	78	22	56	30.1	41.8	37.0

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MARCH 1956, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During March 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births.....	6972	4217	2755	25.3	24.6	22.6
Deaths.....	2248	1376	872	8.1	7.9	8.5
Fetal deaths.....	154	61	93	21.6	19.2	22.4
Infant deaths— under one month.....	122	65	57	17.5	21.8	24.0
under one year.....	191	93	98	27.4	32.1	37.2
Cause of Death						
Tuberculosis, 001-019.....	30	15	15	10.8	9.4	14.3
Syphilis, 020-029.....	4	2	2	1.4	1.5	2.6
Dysentery, 045-048.....	1	1		0.4		0.4
Diphtheria, 055.....					0.4	0.4
Whooping cough, 056.....					0.4	0.4
Meningococcal infections, 057.....	2	1	1	0.7	1.1	3.3
Poliomyelitis, 080, 081.....	1	1		0.4	0.4	
Measles, 085.....	2	2		0.7		0.4
Malignant neoplasms, 140-205.....	250	175	75	90.1	87.6	98.8
Diabetes mellitus, 260.....	29	15	14	10.5	8.0	10.7
Pellagra, 281.....	1	1		0.4	0.4	1.1
Vascular lesions of central nervous system, 330-334.....	310	189	121	111.8	96.7	123.4
Rheumatic fever, 400- 402.....	4	3	1	1.4	0.7	1.8
Diseases of the heart, 410-443.....	764	500	264	275.5	269.6	261.2
Hypertension with heart disease, 440- 443.....	152	69	83	54.8	49.4	58.8
Diseases of the arteries, 450-456.....	46	23	23	16.6	12.4	18.0
Influenza, 480-483.....	9	6	3	3.2	7.6	7.7
Pneumonia, all forms, 490-493.....	104	49	55	37.5	21.8	34.2
Bronchitis, 500-502.....	2	1	1	0.7	1.1	1.8
Appendicitis, 550-553.....	3	2	1	1.1	1.1	1.8
Intestinal obstruction and hernia, 560, 561, 570.....	11	4	7	4.0	3.6	3.7
Gastro-enteritis and colitis, under 2, 571.0, 764.....	5	1	4	1.8	2.5	1.8
Cirrhosis of liver, 581.....	11	8	3	4.0	5.1	5.9
Diseases of pregnancy and childbirth, 640- 689.....	5	2	3	7.0	13.1	19.0
Congenital malforma- tions, 750-759.....	19	15	4	2.7	3.8	4.5
Accidents, total, 800- 962.....	155	113	42	55.9	60.3	57.3
Motor vehicle acci- dents, 810-835, 960.....	85	66	19	30.6	22.2	21.7
All other defined causes.....	398	213	185	143.5	147.5	140.0
Ill-defined and un- known causes, 780- 793, 795.....	82	34	48	29.6	35.6	41.9

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population.

BOOK ABSTRACTS AND REVIEWS

Doctor and Patient and the Law. By Louis J. Reagan, M. D., LL. B. Member State Bar of California; Professor of Legal Medicine, College of Medical Evangelists; Clinical Professor of Forensic Medicine, School of Medicine, University of Southern California; Consulting Staff, Hollywood Presbyterian Hospital, Los Angeles, Methodist Hospital of Southern California, Los Angeles, Physicians and Surgeons Hospital, Glendale, California; and Member of the Staff, Los Angeles County Hospital, Los Angeles. Third Edition. Cloth. Price, \$12.50. Pp. 716. St. Louis: The C. V. Mosby Company. 1956.

Dr. Arthur I. Chenoweth of Birmingham, Alabama, writing in the March 1956 Journal of the Medical Association of the State of Alabama, said: "Medicine and the law have been closely linked throughout the ages. Information available to us regarding the earliest civilizations of Babylon, Egypt and India, fragmentary though it is, tells us plainly that there was, as early as 3000 B. C., an interdependence between the two professions." And it is becoming increasingly more so with each passing day, for malpractice claims continue to mount.

"It is obvious," states Dr. Reagan in the preface to this third edition of his book, "that if the practicing physician is to escape legal liability and penalty, he must have some understanding of his legal obligations to his patient and some knowledge of statistics and court decisions which are related to the several aspects of medical practice

"Of all the obligations and responsibilities burdening the physician," says Dr. Reagan, "the greatest is without question the duty he owes his patient. It is in this that the real reason for his being is found. The patient expects his physician to be a dedicated person—gentle and kind, always available, inexhaustibly patient, everlastingly resourceful, and possessed of endless charity."

Though these be the traits of most physicians, claims of malpractice are a constant threat. It therefore behooves every physician to become acquainted with his legal obligations, and this volume by Reagan will help him acquire that knowledge. The work is readable though, necessarily, it contains many citations. Dr. Reagan has spent a considerable amount of time in keeping his book up-to-date, and he is to be commended for it.

Douglas L. Cannon, M. D.

Bellevue is My Home. By Salvatore R. Cutolo, M. D., with Arthur and Barbara Gelb. Cloth. Price, \$4.00. Pp. 317. Doubleday & Company, Inc., Garden City, New York, 1956.

This story of one of America's oldest and best known institutions is a well-written and authoritative history of Bellevue Hospital. Its develop-

ment, its problems and its importance, along with many human interest happenings that have occurred in the institution, are described.

The development of Bellevue Hospital, of necessity, parallels the growth of New York City, and the growing pains of each are correlated.

The conscientious dedication of the best and latest scientific knowledge for the care of all races, classes, and creeds is described.

The chapter entitled "Medicine and Prayer" and the opportunity of all faiths to have the benefit of their respective clergy is particularly interesting, along with the chapter "Bellevue for Observation."

Bellevue is perhaps best known for its psychiatric services, and this section is excellently described by Dr. Cutolo, who is Deputy Medical Superintendent, and who has been closely associated with Bellevue for the last twenty-five years.

Harold Klingler, M. D.

Preventive Medicine in World War II, Volume II, Environmental Hygiene. Price, \$3.50. Washington 25, D. C.: U. S. Government Printing Office.

This is one of a series of volumes on the same general subject prepared by the Medical Department of the United States Army with Col. John Boyd Coates, Jr., M. C., as Editor in Chief, assisted by Ebbe Curtis Hoff, Ph. D., M. D., Editor for Preventive Medicine, and other assistants. A historical unit of the Army Medical Department consisting of numerous men, prominent in various phases of Army preventive medicine during World War II, provided much of the historical data which are incorporated in this series of books.

Volume II deals with various phases of the Army's World War II preventive medicine program loosely classed as environmental hygiene. Chapters on food management and housing were written by Col. Tom F. Wayne, M. C., USA. Col. William A. Hardenbergh is given primary credit for the sections dealing with water supply, waste disposal and insect and rodent control. Col. Hardenbergh, a sanitary engineer, in his position as virtual chief of the Sanitary Corps in the Army Surgeon General's Office, wielded great influence during World War II. To him should be credited a very important part in the development of Army policies in the procurement of Sanitary Corps officer personnel, the efficient organization and utilization of this corps, and the training and utilization of enlisted specialists in the many activities essential to an effective preventive medicine program.

Most of the activities discussed are of primary interest to sanitary engineers. It is plainly not intended to be a textbook of sanitary engineering,

but simply a history of activities in this field during World War II. There is no horn-tooting. Successes and failures in reaching complete solutions to the many problems encountered are treated with equal objectivity. At the beginning of World War II, adequate knowledge was lacking concerning the practical control of certain diseases in field and battle situations. Consequently research projects were necessarily conducted under trying conditions and with very little time. As examples of such problems may be mentioned the relationship of crowding and ventilation to respiratory diseases, the protection of field drinking water supplies in regard to amebic cysts and schistosomes, the prevention of scrub typhus, and others. It is somewhat surprising that these writers do not indulge in a little bragging in view of the undeniable fact that hospitalization rates due to illness were far lower during World War II than for any previous war.

This volume should be read by all those interested in disease prevention through sanitary measures. It should be of special interest to members and ex-members of the Army Medical Service, as a detailed history of the struggle of that service against disease.

It is suspected that Chapter VIII, Historical Development of Foreign Quarantine, may be of somewhat less general interest than other chapters. The author, Philip T. Knies, M. D., writes, in lengthy detail, the history of the development of foreign quarantine policies—policies which gradually evolved from a long series of misunderstandings and misunderstandings between our Armed Forces, U. S. Public Health Service, Department of Agriculture, Department of Interior, and various foreign nations. This chapter is an able treatise but may prove tedious to readers who have no special interest in this development.

A. N. Beck

Preventive Medicine in World War II, Volume III, Personal Health Measures and Immunization. Editor-in-chief, Colonel John Boyd Coates, Jr., M. C., and Editor for Preventive Medicine, Ebbe Curtis Hoff, Ph. D., M. D. Buckram. Price \$3.25. Pp. 394. Illustrated. The Office of the Surgeon General, Department of the Army. For sale by the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C.

This volume concerns the manpower selection and preventive medicine program, personal hygiene, nutrition, malnutrition and deficiency diseases, preventive psychiatry, accidental trauma and immunization during World War II.

The appendages record the administrative requirements for yellow fever, cholera, typhus, plague and diphtheria immunizations for military personnel during World War II. The volume is complete in its scope and it is felt that the chapters written by Dr. John B. Youmans, Dean of Vanderbilt Medical School, on Nutrition and Malnutrition are especially well written by an authority on these subjects.

General George E. Armstrong states that "this volume admirably discusses in proper proportion

the major problems encountered and the measures taken by the Medical Department to safeguard personal health of the Army personnel during the period of World War II. It reveals a splendid record of which the nation can be proud, and a pattern which should be carefully studied by those who plan the health program of future military forces."

Harold H. Klingler

Concept of Schizophrenia. By W. F. McAuley, M. D., D. P. M., R. C. P. S. I., Principal Psychiatric Registrar, Downshire Hospital, Northern Ireland. Cloth. Price, \$3.75. Pp. 145. New York: Philosophical Library, 1954.

Whenever one assumes the burden of describing the history, etiology, conflicting theories, physiochemical and psychological treatment, and an overall survey of a psychiatric entity, he has taken on a monumental task. Such a task has been attempted by Dr. McAuley in this book.

Beginning with a preface which enumerates the high admission (20%) and resident (45%) rate of schizophrenics in mental hospitals, Dr. McAuley states, "The purpose of this book is to estimate present knowledge of schizophrenia, to assess its historical background and evolution, and to indicate the importance of heredity and environment." In general, the shortcomings Dr. McAuley may display in approaching this arduous goal may be attributed to the brevity of the book.

Historically, the book begins with a brief but rather extensive pre-Kraepelin era rather than dating recognition and classification from Kraepelin. Dementia praecox, evolution of the schizophrenic syndrome, and the temperament and body types of Kretschmer and Sheldon are included. Familiar names appear: Bleuler, Jung, Freud, McDougall. The neurophysiologists and endocrinologists are accorded their due: Lewis and Gibbs, Mott, Cannon, Gellhorn, Reiss.

Chapter II offers somewhat of a synthesis of the psychobiological approach under the heading "the dynamic concept of schizophrenia." Here we find Meyer's reaction types and a brief survey of the experimental approach to the illness. Heredity, social and environmental conditions, neurophysiology and metabolism, diagnosis, and finally a survey of modern treatment methods round out the book. Noting the empirical nature of the "shock" treatments, McAuley relates their genesis and the fallacy of their rationale but concludes that "in spite of this, there can be no question that physical methods have proved of value." Unfortunately, Dr. McAuley includes only sections on insulin and leucotomy in the "modern treatment" chapter. No mention is made of other physiochemical treatments or psychotherapeutic and psychoanalytic work in this area, as e.g., John Rosen's "direct analysis" with severely disturbed schizophrenics.

While Dr. McAuley's book possesses little that is original or provocative, it is a nicely organized, albeit brief, survey of schizophrenia. However, the bibliography is rather meager on recent literature and this reviewer feels that Dr. McAuley falls somewhat short in the first of his stated purposes, namely, to estimate the present

knowledge of schizophrenia. Experimental evidence from physiochemical and psychological approaches within the past decade has been largely omitted.

This book probably will be most appealing for its historical coverage of schizophrenia. Little of diagnosis, treatment, syndrome classification, and no case histories are presented. Many quotations from authorities in various fields punctuate most of the book. While this is not purported to be a technical book, it will find an acceptable place in many libraries of those who desire a better understanding of dementia praecox and/or schizophrenia.

C. J. Rosecrans, Ph. D.

Surgery of the Eye: Diseases. By Alston Calhahan, B. A., M. S. (Ophth.), M. D., F. A. C. S. Fabrikoid. Price, \$25. Pp. 447, with 263 illustrations. Springfield, Ill.: Charles C. Thomas, 1956.

This beautiful book, which exemplifies the finest and most modern in printing, publishing and binding, contains within its delightfully printed and compiled pages the most recent accumulation of experiences in ophthalmic surgery. It is a most graphic text on present day ophthalmic surgical procedures collected from accepted authorities in this field of ophthalmology with the author's added experiences and his own proven case reports. Though the text is entirely written by the author, he has given great space and respect for the opinions and surgical procedures of others, so that a more universal acceptance is apparent with no personal dogmatic stigma.

Needless to comment that the material contained within these pages could be gained by perusing through the present day journals, at the sacrifice of great time, even as to the author's contributions. However, the beauty of this book with its many wonderfully drawn illustrations, the short but gainful reviews of procedures with the author's comments, make it an excellent surgical text which the reviewer, surprisingly, can recommend to all his colleagues.

The contents contain 28 chapters and an appendix in 2 parts. They are as follows: 1. Anesthesia, 2. Congenital anomalies of the lids, 3. Blepharoptosis, 4. Entropion and ectropion, 5. Surgery of lid tumors, 6. Other surgical diseases of the lids, 7. Surgery of the lacrimal system, 8. Congenital anomalies and diseases of the eye, 9. The conjunctivae and cornea, 10. The iris, 11. Preoperative considerations for extraction of the cataractous lens, 12. Technics of extraction of cataractous lens, 13. Operative complications of cataract extraction, 14. Early postoperative complications of cataract extraction, 15. Late complications following cataract extractions, 16. Secondary cataract, capsulotomy and capsulectomy, corepraxy, 17. Secondary glaucoma, 18. Primary glaucoma, 19. Iridectomy for glaucoma (full and peripheral complications), 20. The filtering operations for primary glaucoma—postoperative management and complications, 21. Antiglaucoma operations on the ciliary body, 22. Cataract extraction after antiglaucoma filtering operations, 23. Simultaneous surgery for glaucoma and cataract, 24. Surgery of the sclera, retina, and vitreous, 25. Surgery of the horizontal muscles, 26. Surgery of the vertical muscles, 27. Removal of the eye—implants, 28. The orbit. Appendix, part 1—Advances in management of injuries of the eye; part 2—Advances in management of injuries of the ocular adnexa.

This fine book should be owned by all ophthalmic surgeons. It surveys the specialty and is surprisingly up-to-date on ophthalmic concepts, technics, and therapy. The author is inexhaustible and has come up with a remarkable job. To be appreciated are his personal annotations, with citations from the current literature. The publisher has my praise for the beauty of construction of this book and should be complimented for its design. Like automobiles, hospitalization, etc., the cost of good books, as this, has risen.

Karl B. Benkwith, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

PRINCIPLES OF MEDICAL ETHICS UNDERGOING REVISION

The Principles of Medical Ethics of the American Medical Association, which have served as a guide for physicians for more than a century, are undergoing radical surgery.

The A. M. A. House of Delegates, meeting in Chicago in June, approved a reference committee report on the revision. However, final action was deferred until the clinical session next November in Seattle, "to allow ample opportunity for thorough

study" by A. M. A. members.

House action in Chicago followed a report by Dr. Louis A. Buie, Rochester, Minn., chairman of the council on constitution and by-laws, which said "there exists a broad twilight zone in which the concepts of ethics and etiquette are entangled and in which there is much overlapping and consequent confusion."

The report said the present principles are encumbered by confusing "verbosity and qualifying constructions." It was felt that the principles should be broad, providing a

framework in which interpretations could be made. They should deal with basic principles which can serve as "a ready reference for the busy practitioner."

The report said: "It is important to understand that medical ethics are not distinct or separate from ethics generally, but simply emphasize those general principles which are of particular concern to the medical profession. The ethical physician will observe all ethical principles because he realizes that they cannot be enforced by penal reprisals, but must be binding in conscience."

The Principles as proposed consist of a brief preamble and 10 sections which express the fundamental ethical ideas in the present Principles. Every basic principle has been preserved, but much of the wordiness and ambiguity which made ready explanation difficult have been eliminated. The change would cut the Principles from about 2500 words to a total of about 400.

The 10 proposed sections follow:

1. The prime objective of the medical profession is to render service to humanity with full respect for both the dignity of man and the rights of patients. Physicians must merit the confidence of those entrusted to their care, rendering to each a full measure of service and devotion.

2. Physicians should strive to improve medical knowledge and skill, and should make available the benefits of their professional attainments.

3. A physician should not base his practice on an exclusive dogma or a sectarian system, nor should he associate voluntarily with those who indulge in such practices.

4. The medical profession must be safeguarded against members deficient in moral character and professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

5. Except in emergencies, a physician may choose whom he will serve. Having undertaken the care of a patient, the physician may not neglect him. Unless he has been discharged, he may discontinue his services only after having given adequate notice. He should not solicit patients.

6. A physician should not dispose of his services under terms or conditions which will interfere with or impair the free and complete exercise of his independent medical judgment and skill or cause deterioration of the quality of medical care.

7. In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him to his patient.

8. A physician should seek consultation in doubtful or difficult cases, upon request or when it appears that the quality of medical service may be enhanced thereby.

9. Confidences entrusted to physicians or deficiencies observed in the disposition or character of patients, during the course of medical attendance, should not be revealed except as required by law or unless it becomes necessary in order to protect the health and welfare of the individual or the community.

10. The responsibilities of the physician extend not only to the individual but also to society and demand his cooperation and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.

NEW MALLET FINGER INJURY TREATMENT DESCRIBED

Baseball players now can go right on playing ball with mallet finger injuries, one doctor says.

A new treatment for the injury—in which the finger is bent at the first joint—allows it to heal without interfering with the use of the hand. The new technique is described in the July 21 Journal of the American Medical Association by Dr. Francis E. Hillman, Los Angeles.

He said the "crucial" problem in the treatment of mallet finger is immobilizing the end of the finger in an extended position. Older techniques, including plaster casts and splints, have been used with varying success and many disadvantages, including the need for frequent attention, possible infection, and the interference with the hand's use.

His technique, which involves the use of silk thread sewn through the soft tissues of the finger on either side of the bones, keeps the end of the finger rigid while allowing the rest of the finger to move.

A splint may be used for the first day or two to protect the finger from further injury, but later only a simple dressing is needed. This reduces the period of disability to one or two working days. The dressing may be changed whenever needed without disturbing the healing process, since the threads hold the bone in place. On the average the injury is completely healed within four to six weeks. The threads are then removed.

Dr. Hillman has used the new technique in nine cases of mallet finger injury with "consistently excellent" results. He said it is desirable that the fracture be set and the joint immobilized as soon as possible, but results were equally good in four cases where the patients were first seen six to 18 days after the injury.

The technique has not been tried for mallet finger deformity of long standing, but Dr. Hillman thought it would be useful in such cases. The older the injury, the longer immobilization must be maintained. Since the silk threads do not impede working ability, they could be left in place up to six months, he said.

NEW "TAKE-IT-EASY" TENNIS GAME DESCRIBED

People over 50 no longer have to sit on the sidelines and watch the youngsters play tennis. Now they can get out on the court with their own "take-it-easy" brand of tennis.

The new variation, developed at the University of Florida and called "Florida tennis," makes it possible for lovers of the sport to keep on with it long after aging hearts and limbs would have relegated them to a spectator role under the old rules.

Only two major modifications of the game are needed to slow the pace, according to an article in the July Today's Health, published by the American Medical Association. The court is marked off half as wide as the usual singles court and there is a rule that the ball must always bounce once before being returned.

Harry J. Miller, a Sarasota, Fla., writer, said the new variation eliminates "the sudden starting and stopping, the dash back into position, the lunge for those passing

shots and the youthful speed required for power volleys at the net."

"The older player can cover his court thoroughly without worrying about a skyrocketing pulse rate. His experience and skill count as much as, if not more than his physical stamina," he said.

Tests run on older people playing a regular game and a "take-it-easy" game showed that the modified game raised the pulse rate only a few points, while the regular game raised it 20 to 30 points. But more important, the elderly person's pulse rate did not return to normal during a rest period after a regulation game as did a younger person's.

Miller outlined the rules for "Florida tennis" for players under 40 and for those over 40 as follows:

For players under 40:

In singles, ordinary tennis rules prevail except the court is only half as wide as in a regulation game. The ball is served from behind center of base line into the service (front) court.

In doubles the conventional rules are used, except that players take turns hitting the ball after it is served. As each player hits the ball he retires out of his teammate's way, as in ping-pong.

For players over 40:

In singles the usual rules apply except that the net may be lowered as much as four inches from normal tennis height of 36 inches at center and the ball must always be hit into the back court after the serve. This eliminates running. If it falls into service court, it is out of bounds.

In doubles the same rules apply as for under-40 players, but the lower net may be used.

Miller also told of another variation on the game—triples. The three players on a side take turns hitting the ball. They rotate in back of the base line to keep from running into each other. The rules are the same as for doubles in the under-40 and over-40 groups.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

September 1956

No. 3

THE CHANGING ROLE OF THE GENERAL PRACTITIONER OF MEDICINE AND SURGERY AS IT RELATES TO THE TREATMENT OF TUBERCULOSIS

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The disease tuberculosis, constituting as it does one facet of the general field of medicine, has long been a subject of academic interest to the entire medical profession. Some of the earliest literature pertaining to medicine devoted considerable discussion and comment to disease entities which either are clearly resultant from tuberculous infection or can reasonably be presumed to have resulted from this type of disease. Hippocrates recorded descriptions of pathologic entities that almost certainly represented tuberculosis. With the discovery of the existence of bacteria and their disease producing capabilities by Louis Pasteur scientific medicine entered the scene. The subsequent demonstration of the acid fast staining properties of the tubercle bacillus and its association with the disease known as tuberculosis or consumption was done by Robert Koch and was a masterpiece of research that still stands as one of the greatest accomplishments of medical research. The research principles involved are referred to as Koch's Postulates. Thus it was that relatively early in the era of scientific medicine tuberculosis came to be recognized as a bacterial infection. The mode of transmission of the disease was determined without undue difficulty. The existence of extrapulmonary tuberculous foci was recognized. The relationship existing between primary tuberculosis and reinfection tuberculosis was

promptly demonstrated and its significance appreciated with considerable clarity. In the field of veterinary medicine the widespread prevalence of tuberculous mastitis in cattle and subsequent transmission to man by ingestion of infected milk was recognized. Recent statistics published by the U. S. Public Health Service¹ demonstrate that the reporting of new cases of tuberculosis has, from 1930 until the most recent information available relating to 1954, proceeded at a fairly constant rate of approximately 130,000 new cases per year. The number of new cases has fluctuated moderately but has remained at very nearly this figure. Tuberculosis deaths, however, have been steadily declining. From 1930 until 1945 deaths fell from approximately 90,000 in 1930 to approximately 55,000 in 1945. The overall decline was 35,000 deaths during this interval of 15 years. From 1945 until 1954 (the latest available statistics) the decline was from approximately 55,000 annual deaths to approximately 20,000 annual deaths. Again a decline of 35,000, but over a period of only 9 years as contrasted with 15 years for the previous period. This more rapid decline corresponds accurately with the introduction of specific chemotherapy in the treatment of tuberculosis, and it is thought reasonable to conclude that this was the major factor in accelerating the decline in mortality. However, it should be emphasized that the decline in mortality has meant that a larger percentage of cases

From the Montgomery Tuberculosis Sanatorium.

Read before the Association in annual session, Birmingham, April 20, 1956.

1. Tuberculosis Chart Series, 1955, U. S. Dept. of Health, Education and Welfare, Washington, D. C.

remain in the community in various degrees of activity or inactivity, and under various and sundry arrangements for follow-up either through private physicians or through official agencies.

Prior to the introduction of specific chemotherapy, tuberculosis was almost universally accepted as a disease which could best be handled in hospitals devoted solely to the treatment of tuberculosis. As late as 1945 few if any states in the Union could boast of sufficient bed space to house and properly care for their cases of tuberculosis. Since 1945 the expansion of hospital facilities for the treatment of tuberculosis has proceeded at a great pace all over the country, and now there are many states that have all the beds that they require for the proper care of their own cases of tuberculosis and in some areas privately operated sanatoria, and even some publicly operated sanatoria, have found it necessary to shut down units or to close entirely due to lack of demand for their services.

There has been a corresponding change in the attitude of the medical profession toward the treatment of tuberculosis. Prior to 1945, when it was recognized as a communicable disease of great chronicity and for which little if any specific treatment could be suggested, very few physicians found themselves interested in caring for cases of tuberculosis in home surroundings. Since 1945, however, the development of chemotherapy and the utilization of surgery have projected the treatment of tuberculosis back into the area which many private physicians regard as their proper domain. Accordingly, more and more physicians have actively interested themselves in the treatment of their own cases of tuberculosis and fewer and fewer of them have seen fit to advise their patients to accept hospital care.

This assumption of responsibility for treatment by private practitioners of medicine can, depending upon how competently the problem is met by these practitioners, become either a favorable or a most unfavorable development in the paramount aim of eradicating tuberculosis in human beings.

It would seem quite unnecessary to stress the basic point of necessity for accurate and complete diagnostic study of cases before treatment is initiated. Unfortunately, however, those engaged in the treatment of

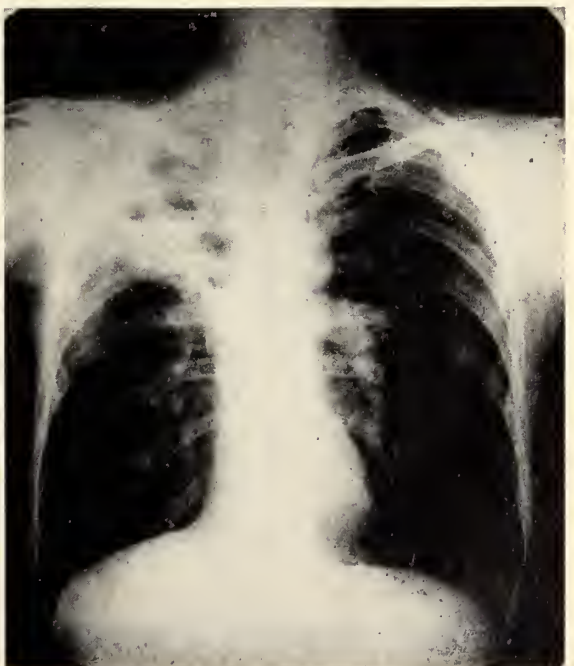
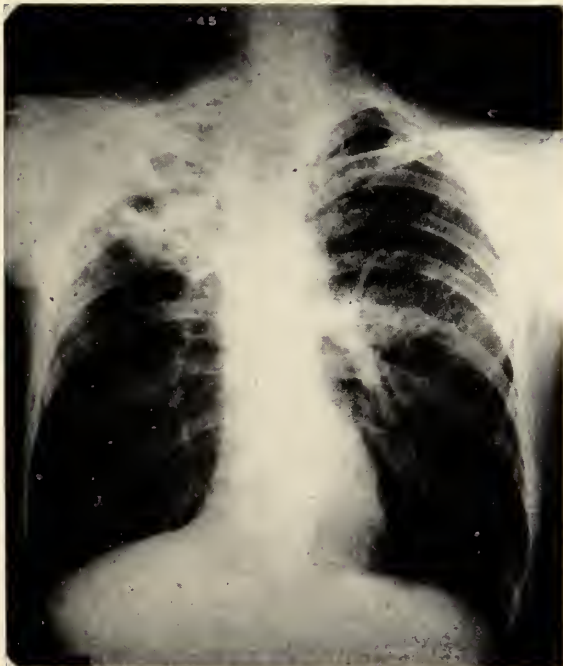
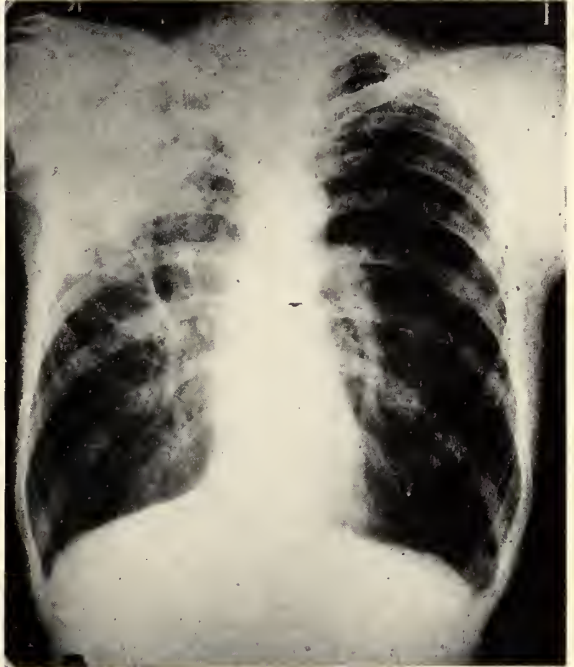
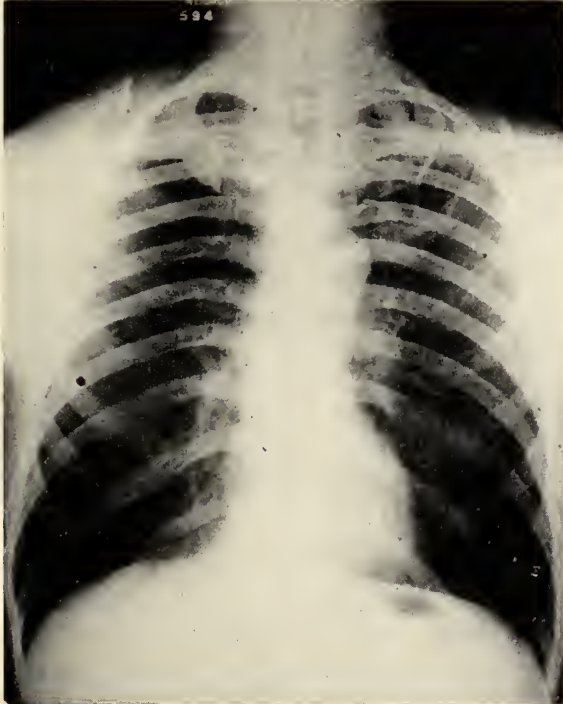
tuberculosis encounter many cases apparently subjected to a diagnosis of tuberculosis and submitted to prolonged courses of therapy without sufficient study to warrant a diagnosis; and this tragedy is compounded when one realizes that the institution of chemotherapy often makes the bacteriologic confirmation of diagnosis almost impossible to obtain even though chemotherapy may be discontinued in an effort to provoke bacteriologic relapse. Once a diagnosis of tuberculosis has been pronounced to a patient he must of necessity regard himself as never completely cured, for any case of tuberculosis, no matter how well or thoroughly treated, is constantly confronted with the possibility of relapse. Because of this, the family and other social relationships are constrained by the suspicion of possible transmission of disease whether this possibility exists in reality or not and by the widespread knowledge that patients who have had tuberculosis frequently find it inadvisable to return to their previous mode of life. Moreover, once the knowledge of a diagnosis of tuberculosis enters into a community, the individual concerned often finds himself, to at least some extent, a social outcast and unacceptable to prospective employers who fear the possibility of relapse, who have no wish to jeopardize their relationships with other employees, and who wish to accept no possible responsibility for financial assistance in event relapse should occur. So it is that from the purely personal and social considerations involved it is a tragedy of great magnitude when a person is told he has tuberculosis before the diagnosis has been so conclusively established that there can be no reasonable doubt concerning it.

It therefore becomes important to undertake a review of the procedures that can logically be expected to be of assistance in the proper establishment of a diagnosis of tuberculosis. It is urgently recommended that no suspected case of tuberculosis be given any form of specific therapy, and particularly antituberculous chemotherapy, until such time as the diagnosis is so well founded that future review of the case could never bring to bear significant doubt concerning the validity of the diagnosis.

It is a well known fact that the most frequent means of first encountering a case of tuberculosis is through x-ray observation of the chest. Widespread use of mass sur-

vey techniques by county health departments makes the chest x-ray one of the commonest medical experiences of the American public today. Moreover, untold thousands of chest x-rays are taken and reviewed by private roentgenologists and in private clinics and hospitals. The extreme value of x-ray observation in the diagnosis of tuberculosis cannot be doubted. However, I affirm personally (and I believe that this statement will be found acceptable by

all who are familiar with x-ray interpretation) that x-ray observation alone is not sufficient to establish a diagnosis of tuberculosis. The importance of this fact cannot be over-emphasized for many are those who feel that a simple chest x-ray suffices to adequately, completely, and irrefutably establish in completeness a diagnosis of tuberculosis. Many are the diseases which can closely simulate the shadows cast upon the x-ray film by lesions caused from tuberculosis. The accompanying figures illus-



trate only one thing, namely, tuberculosis does not cast a characteristic x-ray shadow that can be recognized without doubt. Each of these figures represents an individual who was thought to have tuberculosis, was admitted to the sanatorium, and found to have some other type of pathology. These lesions run the gamut from bronchiectasis through histoplasmosis and bronchogenic carcinoma. None of them represents tuberculosis. Yet, each was thought by competent interpreters to have x-ray evidence consistent with tuberculosis. Consider for a moment the tragedy that would have befallen the case of bronchogenic carcinoma had he been placed on chemotherapy for tuberculosis, and only found to have carcinoma after several months of chemotherapy to which no response had been obtained. Listed briefly, and with no pretense to completeness, is the following list of relatively common pulmonary lesions, that often simulate tuberculosis:

1. The various fungus infections.
2. Various non-specific pneumonias of bacterial and viral etiology.
3. Carcinoma—either metastatic or primary.
4. Boeck's sarcoid disease.
5. Lung abscess.
6. Bronchiectasis.
7. Non-tuberculous granulomata of various types.

In considering how to differentiate between the above possibilities as contrasted with tuberculosis, certain principles deserve at least mention in passing. The most commonly used procedure, and probably the most reliable, is bacteriologic study. In this connection it seems greatly important to emphasize certain facts concerning the bacteriology of the tubercle bacillus which are not understood by some. This relates in particular to the relative reliance to be placed upon smears of sputum specimens, smears of concentrated sputum specimens, and reports of specimens cultured on artificial culture media or by guinea-pig inoculation. The examination of a slide of sputum stained following simple smear is, in the hands of capable technicians, a relatively unfruitful and unreliable diagnostic tool. This should be evident when one stops to consider that many cases of tuberculosis produce from one-fourth to one-half of a sputum cup of sputum per day and the usual

laboratory procedure is to remove a particle of this sputum approximately the size of a pin head. The infinitesimally small portion of the specimen of sputum submitted that actually finds its way to the slide is a striking consideration; but it is compounded when one realizes that of the portion of sputum actually placed on the slide an equally infinitesimally small portion is visualized through the ocular of the microscope. The volume of the original sputum specimen which is actually seen by the technician is indeed quite minute. Hence the possibility of frequent false negative reports. The possibility of false positive reports through visualization of non-pathogenic acid-fast organisms is another great pitfall that can be eliminated only by culture methods.

The concentration of the entire specimen of sputum through digestion and centrifugation permits the resulting concentrate to contain vastly larger numbers of bacilli per unit of volume than were contained in the original specimen, and smears made in this way obviously present to the actual vision of the technician a relatively much greater proportion of the total specimen submitted, but again an amount of the total specimen that is very small.

When this examination is accompanied by culture of the remaining portion of the concentrate on either the artificial media or through guinea-pig inoculation, the possibility of recovering organisms is greatly increased because, by these methods, virtually the entire sputum specimen is examined. I can assure you that it is not uncommon for positive culture reports to be made upon the basis of test tubes of media which, after many weeks of incubation, show only a few colonies of typical acid fast microorganisms. Consider for one moment what excessive difficulty would be encountered in attempting to recover one single tubercle bacillus, from which an entire colony presumably originated, from a considerable volume of sputum by any other technique; but bear in mind that even one tubercle bacillus will theoretically permit transmission of the disease from the source case to a non-infected contact. And reflect for a moment upon the imperative necessity for utilizing the most refined techniques that we have available in the bacteriologic study of sputum suspected to emanate from tuberculous cases. Similar comments apply

to the examination of specimens of sputum obtained through gastric washings, bronchial washings, or through aspirations of bronchial secretions in the course of bronchoscopy. It is common practice in hospitals seeing many cases of tuberculosis to not rely upon single specimens of sputum but usually a battery of three, five, ten, or even more specimens are submitted for examination. This is done in order to further increase the probability of eliminating false negative sputum reports and is done because of the recognized difficulty in the bacteriologic examination of such specimens.

Another simple, but unfortunately widely neglected, differential diagnostic study can be easily done in any health department, any hospital, any clinic, any office, or at any bedside. This is the tuberculin test. Several methods of tuberculin testing have been described in the literature and are widely known. At the moment only two are in widespread use, namely, the intradermal tuberculin test, utilizing either old tuberculin or purified protein derivative, and the patch test. The latter does not involve the use of a needle but it has serious disadvantages in that there is no way of knowing how much tuberculin, if any, was absorbed by the skin beneath the patch. Considerable attention to detail in the application of the patch test is necessary if anything approaching the elimination of false negative reports is to be expected. At best it can be regarded only as a relatively inefficient diagnostic tool and, if adopted, should be employed with this knowledge in mind and negative reactors should be retested using the intradermal test. Of course, a positive tuberculin reaction, no matter the means by which it is obtained, is thoroughly reliable. The intradermal tuberculin test is usually done by using either old tuberculin 1:10,000, giving one-tenth cc. intradermally, or 0.00002 milligrams of purified protein derivative injected in the same fashion. There is considerable variance of opinion as to which of the two preparations is preferable. Both are readily obtainable, however, and each if properly prepared, used when relatively fresh, and injected in the proper fashion will give reliable results. The test is read at 48 and 72 hours and recorded as positive if induration exceeding one-half millimeter in diameter is found. The presence of induration (irrespective of redness)

is the observation upon which the report is predicated. Persons found to be negative to first strength PPD or to old tuberculin 1:10,000 should not be regarded as tuberculin negative until they have been retested using old tuberculin 1:1,000 or PPD 0.0001 milligrams. These latter procedures are carried out in the above outlined fashion. Old tuberculin is also provided in the strength of one to 1:100 which, however, is relatively unreliable as it is easily possible to obtain false positive reactions to this concentrated form of tuberculin. The presence of a negative tuberculin test is widely accepted as conclusive evidence of lack of present or previous infection with tubercle bacilli. The presence of a positive reaction, however, is regarded as conclusive evidence of sensitivity to tuberculin and it is reasonable to assume that this can result only from present or previous infection with tubercle bacilli. It must be emphasized, however, that the tuberculin test when found positive does not, in any sense of the word, warrant a diagnosis of active tuberculosis. Nor is it acceptable as a basis upon which treatment should be instituted unless certain other clinical findings are consistent with a conclusion of active tuberculosis.

As most rules carry with them an exception, so does the above statement concerning tuberculin testing. In persons who are greatly debilitated, either through the ravages of active tuberculosis or for other reasons, the ability to respond to tuberculin testing may be lost in a general state of anergy. In this situation experienced clinical judgment must be exercised in the proper assessment to be placed upon the result of tuberculin testing. In most of such cases of pulmonary disease tubercle bacilli are readily obtainable in the secretions, thereby preventing any confusion as to the diagnosis.

In cases of extrapulmonary tuberculosis, or of miliary tuberculosis, the secretions may be negative, and positive bacteriologic examinations may not be possible to obtain. In this particular situation the judgment of the physician in sizing up the entire clinical picture must be relied upon to supply the defect in the diagnostic picture. Passing reference is made also to the occasional demonstration of false positive reactions resulting from cross-reaction to other antigens. This is a particular problem in skin testing for the various fungus infections where cross-reactions are frequently

obtained with tuberculin and with the fungus antigens. Nevertheless, the use of these additional skin tests is quite valuable in tracking down an obscure lesion.

Additional diagnostic studies that can be of great assistance in securing an unassailable diagnosis of tuberculosis include biopsy of accessible lesions noted on laryngoscopy or bronchoscopy or other types of examination. In this connection it should be stated that bronchoscopy for the purpose of inspecting the tracheobronchial tree in its visible portion, and for the purpose of securing specimens of undiluted sputum direct from the source of origin in the bronchial tree, and also for the purpose of securing a bronchial washing, is of great value not only in securing good specimens for bacteriologic study for tubercle bacilli or other types of organisms but also for securing specimens of sputum to be examined for tumor cells when it is suspected that some form of neoplasm exists. This procedure is also of great value in the performance of lipiodol bronchography when bronchiectasis, either of tuberculous or non-tuberculous etiology, is suspected to enter into the clinical picture.

In cases where symptoms are limited in extent, if present at all, when the x-ray findings are equivocal, and when positive bacteriologic findings cannot be demonstrated and other diagnostic procedures fail to solve the question as to etiology, the behavior of the x-ray shadow on serial x-rays taken at reasonable intervals can often be of considerable value in establishing the exact diagnosis.

As a last resort, and I emphasize this as a last resort only, the response of radiographic abnormalities to specific chemotherapy is at times regarded as the only means of confirming a diagnosis. This, however, can never be conclusive evidence and is acceptable only when all other procedures have been exhausted with no definitive findings being encountered.

Having established beyond all possible doubt a diagnosis of tuberculosis, the principles of treatment deserve next consideration. In the total picture of treatment of the case of tuberculosis it is stated that the principal and most important function of the general practitioner of medicine and surgery in the treatment of tuberculosis has come to be the outpatient management of

cases following discharge from the sanatorium. It is recognized that there are those who disagree strenuously with this concept, and it is sincerely hoped that the following comments will properly outline the reasons for this viewpoint. The presence of the general practitioner of medicine and surgery in the treatment of tuberculosis, even to this extent, is largely a new development and consistent with the change of concepts outlined at the outset of this paper. The importance of isolation, by that is meant complete isolation, of the known case of tuberculosis assumed to be infectious in character is regarded as the key to the control of this disease in any given area. Tuberculosis was accepted as controlled in Scandinavian countries before World War II, prior to any effective chemotherapeutic measures, and it was predicated upon diligent epidemiologic study, effective public health procedures, and isolation of all cases who were known to be infectious. There should be no disputation of the point that isolation of a known case of tuberculosis, as long as it remains sputum positive, constitutes one phase of the treatment of tuberculosis that cannot be ignored without society paying a penalty in the form of constantly developing new cases.

Throughout the years in Alabama something over two thousand new cases of tuberculosis have been discovered each year. So long as sputum positive cases of tuberculosis can roam at will through our communities, continue to expose their families and others, and defy or ignore recommendations for isolation you can rest assured that we will continue to reap our harvest of new cases of tuberculosis each year. And to this should be added the concept of drug-fast strains of tubercle bacilli. It has been demonstrated repeatedly that strains of tubercle bacilli resistant to every known form of chemotherapy now in vogue develop at varying intervals after initiation of chemotherapy in any given case. Cases have been found in which drug-fast organisms have been transmitted from known active cases of pulmonary tuberculosis to previously uninfected contacts who, when first discovered, (and sometimes discovery has been extremely prompt) produced organisms which were drug-fast to the same degree and to the same drugs as the organisms recovered from the original case.

Can you therefore visualize for one mo-

ment the distressing turn of events that will develop if relatively large numbers of active cases of tuberculosis are placed on chemotherapy by physicians in this or any other state and not isolated, but allowed to continue their social relationships, thereby developing drug-fast strains of organisms and transmitting them to newly exposed contacts setting up the development of numerous new cases of tuberculosis infected by drug-resistant strains of the organism which will not respond to chemotherapy as it is now known? These two points relative to the importance of isolation are thought to be most important and to deserve the careful consideration of all who undertake to participate in the treatment and control of tuberculosis under modern conditions.

As a corollary to the importance of isolation, a digression is made at this point to solicit the full and unrestrained cooperation of all physicians with local and state health authorities in the follow-up of known cases of tuberculosis and in the follow-up of known contacts of tuberculosis. While the family physician may well be concerned with his desire to protect his patient from unwanted supervision, this natural feeling should be counterbalanced with a sense of duty to the community to take all possible steps to prevent the development of new cases of the disease.

The early treatment of tuberculosis was predicated entirely upon bed rest following the dissertations of Edward Trudeau. During recent months, and quite properly so, the value of bed rest in the treatment of tuberculosis has been questioned in some quarters. At this moment the National Tuberculosis Association and the American Trudeau Society are financially participating in research calculated to demonstrate beyond reasonable doubt the value, or lack thereof, of complete bed rest in the modern management of tuberculosis. By that is meant from 22 to 24 hours per day lying quietly in bed. It has been widely believed that the assumption of the supine position reduces the frequency of respiratory excursions per minute, lowers the entire rate of metabolism to a nearly basal state, and improves, through simple mechanical factors, the circulation of blood in the area of the lung, usually involved in the tuberculous process. These factors have been thought to account for the merit attributed to the assumption of bed rest in the treatment of

tuberculosis. The need for demonstration of the truth of these arguments, however, is quite apparent. Meanwhile, most authorities in the treatment of tuberculosis feel that fairly complete bed rest, as defined above, is certainly of value during the critical first six to twelve months of active treatment of the disease. It is during this time that the "initial push" is so important in accomplishing the maximum of benefit during the early weeks of chemotherapy; securing closure of cavities in one fashion or another, resecting residual lesions if desirable, and in general restoring as great a portion of the person's pulmonary tissue to active service as can be accomplished. Therefore, I think it is safe to conclude at this time that bed rest is most probably important, and that this importance is of greatest significance during the first six to twelve months after the diagnosis of tuberculosis is established and treatment is initiated. Following this, a condition of declining benefit probably exists and bed rest accordingly can be modified without any loss of therapeutic benefit.

The demonstration by Forlanni of the value of pneumothorax in the treatment of tuberculosis is well known to all of you. Pneumothorax was widely acclaimed as a treatment of tuberculosis following his initial discoveries and was used throughout the world for many, many years. Since the advent of accurate pulmonary function studies it has been clearly demonstrated that therapeutic pneumothorax induced and maintained for 18 to 24 months results in an unavoidable loss of pulmonary function in excess of that sustained by lobectomy. This loss of function results from thickening of the pleura and pulmonary fibrosis developed during the period of collapse. No one can reasonably dispute the effectiveness of the treatment as applied to cavitary disease when the procedure is applied under recognized standards of medical and surgical safety. No one any longer maintains a pneumothorax in which significant accumulations of clear or purulent fluid are encountered or in situations where indivisible pleural adhesions are encountered. Moreover, since the reports of excessive loss of pulmonary function resulting from the use of this therapy have been in the literature, there are many who have decided that therapeutic pneumothorax no longer has a place in the treatment of tuberculosis and

have thereby largely abandoned the procedure.

Other temporary collapse procedures, principally pneumoperitoneum, have also enjoyed widespread acceptance in the control of cavitary disease. Pneumoperitoneum is particularly useful in the management of bilateral lesions or bilateral cavitation. Its place perhaps is not that of a definitive therapy but rather one that is of great assistance in bringing the apparently hopeless case of tuberculosis, with the aid of bed rest, isolation, and chemotherapy, to the point at which definitive surgical therapy can be undertaken.

Other temporary collapse measures, including extrapleural pneumothorax, oleothorax, temporary phrenic paralysis, and several other less widely accepted procedures have fallen progressively into abandonment for various reasons.

Permanent collapse therapy by surgical means continues to be a widely accepted procedure. Shortly after the demonstration of the value of collapse therapy in the form of pneumothorax, the surgical approach to this problem suggested itself when lesions were encountered which, because of adhesions or other factors, could not be satisfactorily controlled through the use of the reversible and less drastic forms of temporary collapse. Thoracoplasty (collapse through the resection of the bony thoracic framework) was developed by trial and error and with numerous disheartening results. However, the modern staged thoracoplasty procedure using the posterior approach and usually involving the removal of the upper seven to nine ribs has demonstrated (1) that it is a safe procedure and (2) that it is an extremely effective procedure. The assertion has been made and is borne out by statistics that of all the people now alive with inactive tuberculosis probably the greatest number of these owe their inactive status to the use of thoracoplasty. Its effectiveness exceeds that of pneumothorax and any other type of collapse that is known at this time. Its great disadvantages are (1) the necessity for two or more operations instead of one, and (2) the physical disfigurement that results.

In order to overcome both of these difficulties the use of various types of plombage has been undertaken. The first of these was the use of oil instilled into extrapleural

pneumothorax spaces, often with adverse results. Following this, a number of supposedly innocuous materials were used to fill similar plombage spaces, namely, paraffin, sponges, and, lately, various plastic materials, including lucite. The lucite plombage, utilizing hollow spheres of this material, was pioneered about 1946 with results that seemed at first to be quite advantageous. The originators of this procedure, however, were quick to abandon it when certain difficulties made their appearance. It was, however, pursued with interest by other clinicians with the result that ultimately the use of an extraperiosteal site rather than an extrapleural site seemed to offer certain advantages. The procedure was then used to bring about selective collapse of the upper lung by a two-stage operation in which the first stage consisted of removal of the periosteum from the ribs over the area to be collapsed and the forcing inward of the entire intrathoracic content over this area, following which a sufficient number of lucite spheres contained in a plastic sheet were inserted to maintain the collapse. At varying intervals after the performance of this first stage, a second stage was carried out at which time the lucite spheres were removed and at the same operation the bony thorax overlying the plombage area was also tailored so that the collapse became permanent. The widespread use of a permanent lucite plombage was advocated after a few fortuitous cases were observed in which the second stage of the planned procedure was, for one reason or another, not carried out. The development of sterile abscesses, apparently resulting from foreign body reaction, necrosis, devitalization, and eventual virtual disappearance of the bony thorax over the remaining plombage and other disadvantages have been observed by the writer and others following the use of the extraperiosteal lucite plombage as a definitive procedure not followed by subsequent thoracoplasty. After an extremely disappointing series of cases in which lucite plombage in the extraperiosteal plane was attempted as a definitive procedure, a deliberate return to the original concept of it as a two-stage procedure, to ultimately conclude as a conventional thoracoplasty, was resorted to again with disappointment in that it was found that it was not possible to as accurately control the collapse by lucite plombage, fol-

lowed by thoracoplasty, as by conventional two- or three-stage thoracoplasty undertaken in the usual fashion. For this reason the lucite plombage procedure has been completely abandoned by our clinic and return has been made to conventional thoracoplasty.

In addition to isolation, bed rest, chemotherapy, and collapse therapy in those cases where indicated, excisional therapy has come to be one of the great kingpins of treatment. Prior to the introduction of specific anti-tuberculous chemotherapeutic agents, excisional therapy of tuberculosis was widely regarded as impossible due to spread of disease following operation and local tuberculous complications resulting from surgical intervention. However, with the development of effective chemotherapy, the feasibility of excision was soon proven beyond reasonable doubt, and during recent years widespread use of resections of pulmonary tissue, ranging from wedges of local necrotic foci through segmental excision of one or several segments, lobectomy, and pneumonectomy, has been widely engaged in with great success. The post-operative morbidity and the operative mortality resulting from employment of this type of treatment is, in good hands, almost negligible. In fact, postoperative morbidity following lobectomy, or even pneumonectomy, is often times less than that observed following a conventional first stage thoracoplasty. The procedure is quite safe, providing it is undertaken in the presence of negative sputum. In all cases, bronchoscopy should be done prior to attempted excision in order to rule out the possibility of tracheobronchial involvement and ulceration that would perhaps preclude the healing of bronchial stumps, or result in the persistence of positive sputum findings even though the originally active pulmonary lesion had been excised in its entirety.

Finally, having isolated the infectious case of tuberculosis, provided it with hospitalization where dietetically proper nutrition is assured and bed rest is enforceable, and having submitted the case to some form of specific chemotherapy employing two or more of the available drugs, and having supplemented these measures by the employment of either temporary or permanent collapse therapy or excisional therapy, and having brought the case from one of an in-

fectious character to one that is reliably and consistently sputum negative even on repeated culture, then comes a phase of therapy that is of greatest importance and which is perhaps most widely neglected, namely, rehabilitation. The disease knows no social barrier as it can involve the extremely wealthy and greatly favored socially as well as the most menial laborer. However, the tendency is widely acknowledged to exist for the disease to be found chiefly in those of relatively meager economic and social status. The return of apparently inactive cases of tuberculosis to the surroundings in which the disease originally developed, namely, poor nutrition, squalor, or social overcrowding and heavy labor, is virtually a demand that the disease reactivate and usually the demand is heeded by natural forces. It becomes extremely important, therefore, for these treated cases to be retrained to accept some form of employment where their physical abilities will not be overtaxed and yet one that will provide them with an income sufficient to overcome the economic factor that precipitated the original illness. This is not a small undertaking. It requires vision on the part of counselors, cooperation on the part of the community, understanding on the part of industry, and discernment on the part of the physician. The gradual restoration of physical activity from a status of complete bed rest to one of employability is a delicate, precise, and an obviously important function of the patient's medical advisor, and one that cannot be successfully engaged in until considerable experience has accumulated on the part of the physician.

Following discharge from the sanatorium, under current concepts of therapy, it is considered to be important that chemotherapy be maintained to a total duration of no less than twelve months, usually eighteen months, in a few cases to twenty four months, and rarely for an indefinite period of time. During this posthospital period, serial x-rays of the chest must be taken and compared with films taken prior to and during the patient's original illness, and supervision of the patient's sputum status by frequent cultures is imperative. It is only through the examination of a number of specimens, minimizing the factor of laboratory error and crudeness of technique, that the physician can develop in his own mind a sense of accuracy that is needed in

order to assure a patient of his continued inactivity. It should be emphasized at this point that chemotherapy, whether it be in the hospital or on an outpatient basis, should always include two of the recognized antituberculous drugs. Those that are in common use at the present time are:

Streptomycin,

Para-aminosalicylic Acid (PAS),

Isoniazid (INH),

Viomycin, and

Pyrazinamide (PZA) (restricted to hospital use).

The drugs of primary importance are streptomycin and isoniazid. The function of PAS appears to be to retard the development of bacterial resistance to the primary drugs. As emphasized above, this is of the utmost importance and it is for this exact reason that it is recommended by everyone engaging in the chemotherapy of tuberculosis that *never* should any single drug be employed alone. Streptomycin or isoniazid employed alone produces bacterial resistance in a matter of days. PAS employed alone is of relatively little value. A combination of streptomycin and PAS or of isoniazid and PAS results in an extremely effective chemotherapeutic tool with the current evidence, indicating that the combination of isoniazid and PAS is, of the two regimens, the more effective by a slight margin. Because of the lack of necessity for parenteral administration, this combination is judged to be preferable for outpatient management. The dosages implied are respectively 12 grams per day of PAS and 6 milligrams per kilo of isoniazid.

SUMMARY

While tuberculosis is one of the oldest diseases known to mankind, it is one that has only recently become of general interest in the routine practice of medicine. Due to recent advances in chemotherapy and surgery, the general practitioner of medicine and surgery is for the first time finding this to be a field of medicine in which rewarding and interesting clinical experiences can be found. The importance of correct diagnosis, the proper use of the chemotherapeutic and antibiotic agents available, and the application of surgery, bronchoscopy, and specialized x-ray techniques is a matter that those who would participate in the treatment of this disease must become familiar with.

The continuing importance of standard forms of treatment, including hospitalization, isolation, and bed rest, is stressed. Serious pitfalls that may be expected to develop if these principles are not followed are briefly pointed out.

Doctor Gives Advice on Childhood Convulsions—Convulsions in children are alarming, but when they occur the best thing to do is to "keep your head" and call your doctor, says a Milwaukee pediatrician.

It is essential to protect the child from injuring himself and others, but care must be taken not to injure him in the process.

"Many more children have been injured by well-meaning parents or helpers than have injured themselves in a convulsion," Dr. M. G. Peterman said, adding that he had seen more children burned than helped by being immersed in hot water.

When the doctor arrives and starts asking questions instead of treating the child, don't be alarmed, he said. The convulsion will probably be over by then, but the underlying cause of the convulsion must be found. A convulsion is a symptom, not a disease, and treatment must be aimed at the cause.

For many years convulsions were considered as "a necessary evil of childhood," Dr. Peterman said in the July Today's Health, published by the American Medical Association. They were attributed to a delay in the development of the central nervous system, delayed eruption of teeth, worms, and overindulgence in certain foods.

A 25-year study of more than 3,000 children produced a new concept of convulsions, he said. A convulsion indicates an acute disturbance, irritation, infection or temporary upset of the brain. The study showed that certain diseases which are more prominent during certain periods of childhood accounted for many of the convulsions. For instance, in the first month of life, the most common cause was disturbance of the brain during or shortly after birth.

In the early months of life the most common causes are acute infection, including contagious diseases, infantile tetany or disturbance of calcium metabolism, and brain injury at birth. As age increases epilepsy is added to the list. Nearly half of all convulsions make their first appearance when the child is from six to 36 months old, he said. Although serious, convulsions appear in only about 1 per cent of sick children.

A child may recover from a convulsion and never have another. Yet the questions of the cause, whether he will have another, and what can be done to prevent it remain. The family doctor, who is familiar with the child's history and problems, is the best person to answer these questions, he said. If the parent can give him an accurate and complete history and an intelligent description of the events before and during the convulsion, the doctor will probably reach a diagnosis of the cause. If he cannot, he will refer the child to a specialist in convulsive disorders, Dr. Peterman said.

**A NEW APPROACH TO THE AUTOPSY PROBLEM
A METHOD USED FOR NINE YEARS BY A GROUP OF
MORGAN COUNTY PHYSICIANS**

E. M. CHENAULT, M. D.

Decatur, Alabama

The scientific status of modern medicine is based largely on the study of conditions found at postmortem examinations. Hospitals are graded for accreditation on the number of autopsies performed. Clinical diagnoses are often obscure, uncertain, or may be erroneous. Postmortem examinations give us a better understanding of the processes of disease. This is the basis for more accurate diagnosis and more effective therapy; these advance as the basis is broadened. Physicians constantly seek more knowledge.

In the larger hospitals, pathologists are in daily attendance; well equipped postmortem rooms and laboratories are at hand. To have an autopsy performed, the resident has only to report by phone that the signed permission has been obtained. The pathologist or resident in that department then does the autopsy, frequently alone.

The picture is different in the smaller hospitals and communities outside the metropolitan areas. From these points, as a rule, surgical specimens only are sent to the pathologists in the larger centers. Pathologists do not visit these areas regularly and are not available for postmortem examination.

Physicians in Morgan County had been interested in autopsies on particularly interesting or unusual cases before World War II. Occasional autopsies were done by the physicians. Few were done—probably three was the greatest number in any one year. Selected tissue specimens were sent to a pathologist for microscopic studies. This plan was informative but not satisfactory. The autopsies were done by physicians unaccustomed to such, and the examinations tended to be limited. The effort required was excessive. The plan was not satisfactory.

Following the war the interest became even keener. Discussions were held among ourselves and with others. It was discussed with the late Dr. Roy R. Kracke who was

known personally by the Morgan County physicians. These discussions began while he was Professor of Pathology at Emory University; he had no suggestions then. The subject was brought up again after he came to Birmingham as Dean of the Medical College. We have been very grateful for his help. I think it was at the meeting of the State Medical Association in Birmingham in 1947 that the discussion with Dr. Kracke was renewed. He said, "Let me see what I can do. I will talk to you later." I believe he discussed the matter with Dr. Roger D. Baker who was then Professor of Pathology. In a short while he returned with Dr. J. F. A. McManus and said he would like for us to talk with him.

We reached a tentative agreement with Dr. McManus that he would come to Decatur or Hartselle, perform the autopsy, take specimens of tissues back to Birmingham, and give us the complete report after the microscopic studies were completed. The cost for the services would be \$50.00.

This plan was adopted by the interested physicians in Morgan County. It was agreed that the costs of each autopsy would be borne by the group as a whole, regardless of whose case came to autopsy. Ten or twelve physicians constituted the membership of the original autopsy group.

The plan was put into operation. Permission for autopsy was not requested in every death; nor was it granted in every case in which it was requested. Dr. McManus was called by telephone when the occasion arose, a definite time was set for the autopsy, usually at night to avoid interference with other plans and appointments. The autopsies were done at the funeral homes in Decatur and Hartselle. (As yet we do not have a postmortem room in the Decatur General Hospital.) With the exception of one Negro undertaker in Decatur, the funeral directors have been extremely cooperative. The arterial injections have usually been done by the undertaker before the autopsy in order to avoid technical difficulties for him. This has helped in our maintaining the spirit of

cooperation on the part of the undertakers who have had misgivings about the effectiveness of injections after autopsy. One of the undertakers even purchased, and furnished for our use, a set of autopsy instruments.

When each autopsy was held, all the members of the group were notified and were privileged to attend. A high percentage did attend each autopsy. When Dr. McManus was unable to make the trip, some other member of the staff in the Department of Pathology would come instead. Dr. Roger D. Baker came to Decatur several times. Soon each autopsy became a seminar. Pathology was thoroughly demonstrated. Free discussion was carried on throughout the examination; it was not limited to the case under study. Much knowledge was gained, and scientific interest stimulated. The final report, including microscopic studies, gave us a complete picture of the findings; copies were made and furnished to members of the group.

Following the untimely death of Dr. Kracke, the Department of Pathology of the Medical College continued for a while to furnish the services as before. Then we were informed by the Dean, Dr. Durrett, that the Medical College could not continue these services. He stated that since such services were furnished to our community by the Medical College, other communities would have the same right to request the services if they should so desire. Personnel and facilities at the Medical College would not be adequate to take care of such demand.

We next talked with Dr. J. A. Cunningham of Birmingham, who said he would arrange to have our autopsies done. That change was made in the spring of 1953. Since that time, Dr. Cunningham, when called, has sent his assistants who are students in the third or fourth year classes in the Medical College. These men have done a good job in conducting the gross autopsies. They take the tissues back to Birmingham where they are reviewed by Dr. Cunningham or his associates, Dr. Brooks Bishop or Dr. Walter F. Scott, Jr. Following microscopic studies, we receive complete reports in a few weeks. It is our understanding that the student assistant receives \$35.00 of the \$50.00 which we pay for each autopsy.

Attendance at the autopsies has declined

since the change-over. Dr. Cunningham's assistants are very capable, but lack the background and experience needed to demonstrate and discuss the pathology as authoritatively as we should like. Notwithstanding this objection, interest in the program continues.

The autopsy group is a rather loose organization. There are no officers other than a secretary-treasurer who is responsible for notification of the members, accounting, and the distribution of case reports. Membership is voluntary and may be started or ended at any time. There is a fine spirit of cooperation. The number of physicians participating has varied from 10 to 18. The assessment of the members for each autopsy has decreased to \$3.00 or less; it was \$5.00 at first.

In preparation of this report, it was found that exact figures were not available for the first year or so of operation. According to the data available, from January 1, 1949 through March 31, 1956, 111 autopsies have been held; 19 in 1949, 11 in 1950, 10 in 1951, 10 in 1952, 22 in 1953, 20 in 1954, 12 in 1955, and 7 in the first three months of 1956. Many cases coming to autopsy did not die in the Decatur General Hospital; but as a result of this program the ratio of autopsies to deaths in that Hospital in the fiscal year ending September 30, 1954 was 15.58%, in 1955 it was 12.64%. Our Hospital has a present rating of 65 beds. According to the 1950 census, the population in round numbers was: Morgan County, 53,000; Decatur, 20,000; Hartselle, 3500.

This plan has been in operation now for about nine years. It has not been publicized, but has become known; the people seem to appreciate the spirit of the program and the way in which it is financed. Prejudices have given way; it has become progressively easier to obtain permission for autopsy. (Surprisingly enough, there have been some requests from families before permission has been asked.) It has seemed that the survivors have derived a certain comfort, or ease of mind, when they have been informed of the exact conditions found. It quiets the question of what might have been.

Many times the autopsies have revealed interesting and significant pathology. They have been interesting and stimulating. The inherent value may be found in the deriva-

tion of the word. According to Webster's dictionary, "autopsy" is derived from two Greek words which mean "self" and "to see," with the literal meaning "to see for oneself."

The intent of this discussion is not to

analyze the findings, but to report a method by which autopsies can be done in less populous centers. So far as we know, we believe the plan is unique.

1115 Somerville Road S. E.

THE STATE OF THE MEDICAL COLLEGE OF ALABAMA

ROBERT C. BERSON, M. D.

Birmingham, Alabama

When your President asked me to be on this program he was kind enough to give me a very wide choice of both title and subject matter. After some thought I have come to the conclusion that the best thing for me to do is to report to you on the condition of the Medical College as frankly and clearly as I can in the time available.

At the present time 17 per cent of the members of this Association are graduates of the Medical College of Alabama. Within the next twenty-five years the Medical College will graduate more physicians than there now are in the whole state. And the Medical College and its teaching hospitals naturally have important professional relations with many of you. Since the members of this Association are, in spirit, the alumni of the Medical College and make up the front rank of its constituency, it seems only appropriate that the Dean report to you from time to time on its condition.

STUDENTS

The basic ingredient in any educational program is the student himself, so the availability of an adequate supply of interested and well qualified students is of major importance.

From the time the Medical College was established in Birmingham until 1951, 52 students were accepted each year. The size of the entering class was then increased and in every year since then 80 students have been accepted. Fig. 1 shows the number of applicants and the number of students accepted each year, 1946 through 1956.

From these figures it is obvious that there has been a downward trend in the number of applicants. Naturally the number of

applicants who were really well qualified also declined. The fact that some of the students actually admitted were not suited to the study of medicine is revealed in part in the attrition rate, which is shown in Fig. 2.

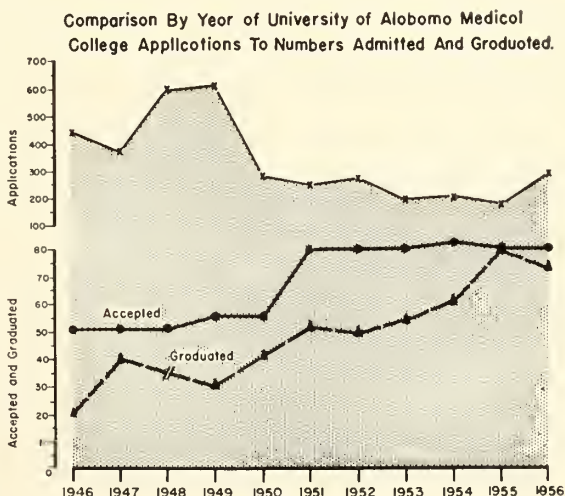


Fig. 1

Comparison By Year of Number of Applications, University of Alabama College of Medicine, To Number of Students Dropped.

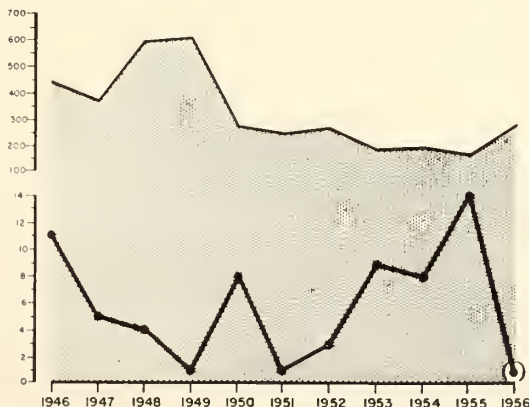


Fig. 2

You will, I think, be interested to know that this trend in our school is but a part of a national trend, as shown in Fig. 3.

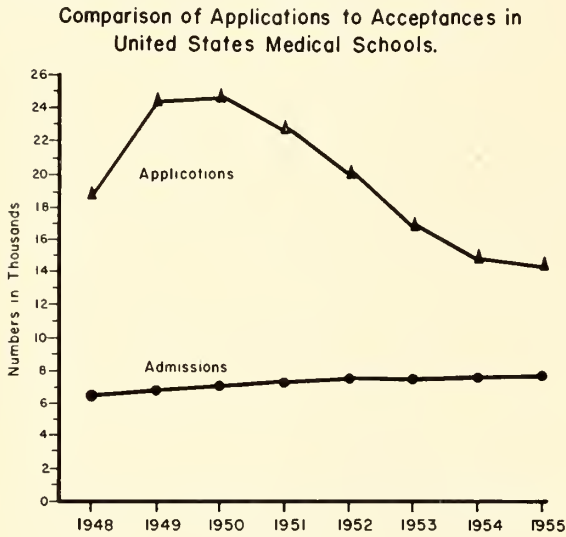


Fig. 3

For several years the number of students throughout the country who apply for admission to medical schools has declined. Another factor which intensified the problem for our school was the fact that until June 1955 it was the policy of the Medical College to consider only applications from residents of the state of Alabama. In fact, residents from other states were not even permitted to complete application blanks, so the figures in Fig. 1 do not include any nonresidents from 1950 on.

It is, of course, important to provide educational opportunities for interested and well qualified residents of our state. This need is partially met by the fact that each

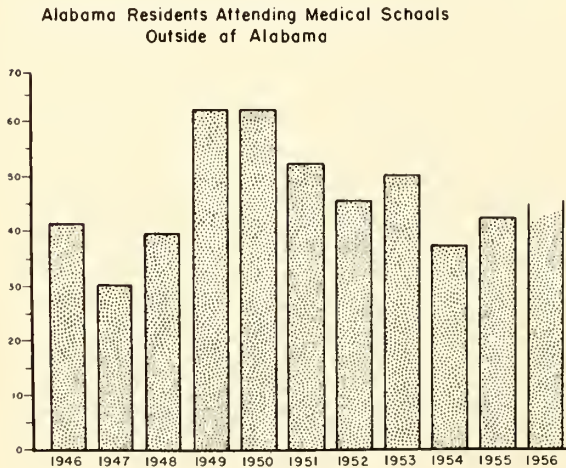


Fig. 4

year a considerable number of our residents enter medical school in other states. The number doing so each year is shown in Fig. 4.

And it should be borne in mind that from the time the school was moved from Mobile in 1920, until the four-year school was opened in Birmingham in 1945, every resident of this state who wished to become a physician had to leave the state for that part of his education. Considering all of these factors, the Board of Trustees of the University, at its commencement meeting in June 1955, approved the policy of the Medical College continuing to give preference to residents of Alabama, but making that less than an overriding preference and giving serious consideration to a few extremely promising students from other states each year. This policy has been placed in effect and in the fall of 1956 there will be 4 students in the entering class who are not legal residents of Alabama, but who are clearly very promising indeed as future physicians.

There are some indications that the quality of the students currently enrolled and of the recent graduates is quite satisfactory. These indications consist of: the opinion of the faculty, many of whom have taught in other medical schools in various parts of the country and have that experience to draw upon, the favorable reports we frequently get from hospitals in which they have accepted appointments and communities in which they practice, and the fact that they are increasingly successful in getting appointments as interns in hospitals that are popular and highly regarded.

Fig. 5 shows the number each year who have been appointed in certain hospitals generally considered as offering very fine internships.

These indications are encouraging, but the faculty and students are anxious to know more about how the quality of our students and program compare with other medical schools. For that reason, beginning with the current school year each student is being required to take Parts I and II of the examination of the National Board of Medical Examiners. This examination is prepared by outstanding men in each field covered, and is given simultaneously throughout the country. The Medical College of Alabama is not requiring that the student

Comparison of Internships Received by U. of A. Graduates in University Hospital, Birmingham Hospitals and Other Teaching Hospitals.

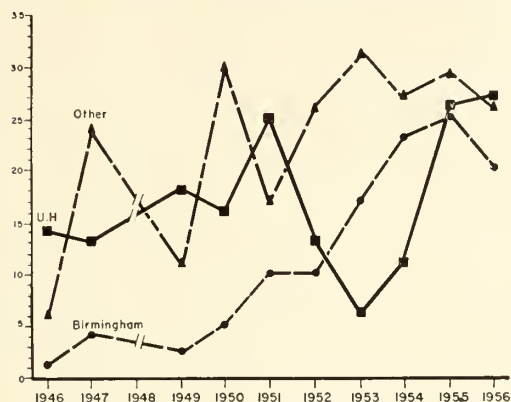


Fig. 5

bear any expense in this procedure, unless he or she elects to take the examination for credit and use for reciprocity, but it will receive the grades of each student on each examination, as well as summaries of the grades of students from all other schools and thus be able to compare our work with that of other medical schools throughout the country.

FACULTY

Obviously the second essential ingredient in any educational program is the faculty. A well balanced total program in a medical school requires: able men in practice who are interested and willing to give some of their time for teaching, scientists talented and trained in the basic medical science who are interested and gifted in teaching medical students, and dedicated and experienced full-time clinicians who can bring science to the bedside and supervise the clinical indoctrination of the students.

Fortunately there is a large group of able men in practice, mostly in Birmingham but to some extent in other parts of the state, who are increasingly interested in teaching and willing to give some of their time to that endeavor. If their sympathetic interest continues to increase, the needs of the Medical College in this area will be well met.

In the basic science areas of Anatomy, Biochemistry, Physiology, Pharmacology and Microbiology the Medical College is fortunate in having a number of talented scientists trained in these fields and interested in teaching medical students. These departments are relatively well provided with space and facilities in the Medical-

Dental Building which was designed for the purpose and occupied in 1951. Their budgets are fairly strong because of the fact that they also teach dental students and the School of Dentistry provided 5/13th of the budget of each of these departments. In a local sense they are pretty stable, partly because ours was a two-year medical school of good quality long before it was placed on a four-year basis, although there is some need for improving some salaries and recruiting two or three suitable additional members of the faculty in several of the departments.

The research programs and accomplishments of the men in these departments are good, and each year more active. There is no completely reliable way to express research in quantitative terms, but an important indication that the program is growing is that each year the medical college receives more research grants and gifts. At the present time it receives approximately half as much money in support of research as its appropriation from the Legislature.

On the whole, our Medical School is more fortunate in the basic medical science departments than most others. The future of these departments in all medical schools is causing grave concern all over the country because it is so difficult to recruit an adequate number of suitably talented young men into these fields. The plain fact is that throughout this country neither the caliber nor the number of young men being recruited to these fields is adequate to assure a sound future. To a thoughtful man it seems very clear that the clinical advances of today are heavily dependent upon the successful basic research of a decade or so ago, and that for the doctors of the future to be able to make full use of advances to come in medical knowledge they simply must have a sound basic grasp of these areas of knowledge and their methods.

The difficulty in recruiting an adequate supply of talented young men into these fields is complex. It is probably related to the facts that because their work is basic their intellectual triumphs become known to only a small circle of other scientists particularly interested in the subject, public recognition of these triumphs comes late, if ever, and even many thoughtful physicians are scarcely aware of the debt the medical profession and all of society owes to the

many fine men who have labored in these fields. This in turn is related to the fact that it is difficult to secure for these departments and these men financial support that is at all comparable to that available for other departments and men working in other fields. Also important is the fact that it is now possible to do quite sound and important research in clinical departments, and in ways that deal directly with patients.

Senior men now in these fields made their career decision years ago and their training and experience have been consistent with that decision. It is likely that they will continue to do the best they can in their field throughout the remainder of their careers. But every year talented young men, standing at the beginning of their careers, are considering these and other factors and not enough of them decide upon careers in these fields to insure the future of these disciplines as a part of medical education.

In the clinical areas the medical college began in 1950 to add a few dedicated and experienced full-time clinicians as the opportunity presented. By now there are small full-time nuclei in Medicine, Surgery, Pediatrics, Psychiatry, Anesthesiology, Pathology and Radiology. As important as the role of the voluntary faculty is, the full-time faculty carries the heaviest load in teaching of students, interns and residents, conducts almost all of the research in clinical areas, carries very heavy responsibility for the care of indigent patients, and most of the load of administration within the departments.

Although within the last year 10 individuals have been added to the full-time faculty in these clinical departments, the full-time nucleus is still considerably too small for the heavy load it carries. There are only 6 in Surgery, 5 in Pediatrics, 2 in Psychiatry, 3 in Anesthesiology, 6 in Pathology and 4 in Radiology. Only in Medicine is the full-time nucleus approximately large and strong enough at the present time.

Throughout the country the adjustment of members of the full-time faculty in clinical departments within the professional community has been difficult in most cities. Many incidental factors and clashes of personality have entered into the difficulty in various cities, but the major point of friction is the care of private patients by the full-time faculty. If the full-time clinician must

care for too many private patients his time for his real interests of teaching and research is seriously compromised. In that event his colleague in practice may feel that the competition is unfair. On the other hand a prime requisite in a full-time teacher is that he be unusually competent in his own professional field, and to retain that competence he must continue to have some direct responsibility to, as well as for, patients. And the members of the community who can pay their bills deserve the special skills of full-time clinicians when it has been properly determined that those services are important in their welfare, just as do the indigent.

In order to establish the proper balance of these factors the full-time clinicians in the Departments of Medicine and Surgery have worked out a statement of general principles governing this matter. This statement is as follows:

PRINCIPLES GOVERNING THE PRIVATE CONSULTATION PRACTICE OF MEDICINE BY THE FULL-TIME CLINICAL FACULTY OF THE MEDICAL COLLEGE OF ALABAMA

1. Private consultation practice by full-time faculty members is the concern of the academic authorities and should be handled through the office of the Dean.
2. Such practice is only justifiable if it aids the academic program in that it must not encroach upon the teaching and research activities of the faculty.
3. Such practice must be limited to patients referred by physicians and must be conducted in the Medical Center, except when special circumstances justify specific permission.
4. The primary purpose of private consultation practice is to render service to referring physicians and their patients. In order to render this service in the best manner, a limited amount of income from private patients will be used to supplement the salaries of the full-time faculty performing the service.
5. It is not the purpose of such practice to earn income for the school or to replace academic budgets.
6. It is desirable to establish limits on the annual earnings of the full-time faculty from such practice. In establishing such limits the following are to be considered:
 - a The individual's academic rank.
 - b. The nature of the discipline in terms of gravity of responsibility, duration of training and years of working capacity.
 - c. Downward economic adjustments to meet the agreed upon limits are to be made gradually rather than abruptly, taking into account the individual's current and committed future obligations, but will be completed in all cases by July 1, 1956.

d. Some flexibility will be retained for both upward and downward adjustment to meet drastic economic changes.

7. A fee scale for professional consultation services should be such as to conform with sound medical practices, but the physician furnishing the services must retain the right to provide his services free of charge in selected cases.

8. It is intended that the full-time faculty members are those persons who receive a relatively substantial salary from the University and who desire and intend to pursue an academic career. The term does not include physicians who receive a small part-time salary from the University and who maintain a personally supported private office in town, outside of the buildings of the Medical Center.

9. These principles have been harmoniously arrived at and agreed upon by all of the full-time clinical faculty. The administration has been most helpful, but has neither initiated nor directed the thinking of the faculty in the matter. The faculty wishes to abide by these principles permanently.

These principles have been approved by the administration and the Board of Trustees of the University. In order to place these principles in operation, specific agreements have been made with every member of the full-time faculty in all clinical departments in the Medical College as to the maximum income from consultation fees from patients they will be allowed to keep in addition to their normal compensation from the Medical College. The maximum from this source that any individual may keep is \$10,000 per year and for most of the men the sum is much smaller.

These principles and amounts are consistent with the agreements with all the members of the full-time faculty in all the clinical departments. They were placed in effect July 1, 1955, and have been working well since then.

The faculty and the administration are convinced that this is a step in the right direction. Many other and more important steps are needed to make it probable that for a long time to come the Medical College will be able to hold and attract a first rate faculty. Some of the further steps to be taken include: providing appropriate academic facilities in the form of laboratories, offices, conference rooms and their equipment, providing an adequate number of full-time men to distribute the loads of teaching, care of patients and administration and give each man sufficient time for his own research, and improving the services of the hospital so their teaching can be conducted in a

proper setting and those patients for whom they are responsible, referred and indigent, receive first rate care.

FACILITIES

In addition to students and faculty there must be some sort of setting in which the educational process is conducted. Inevitably this setting has a very large silent influence on the quality of the program, and the Medical College has an opportunity and desperate need to improve its facilities.

As many of you will recall, when the decision was made to locate the four-year medical school in Birmingham an important part of the decision was the availability of Jefferson-Hillman Hospital. Arrangements were made for the entire block containing Jefferson-Hillman Hospital to be transferred to the University. At the same time the Medical College purchased some existing apartment buildings located not far away. Fig. 6 shows a diagram of the property of the Medical College when it began the Birmingham chapter of its long life.

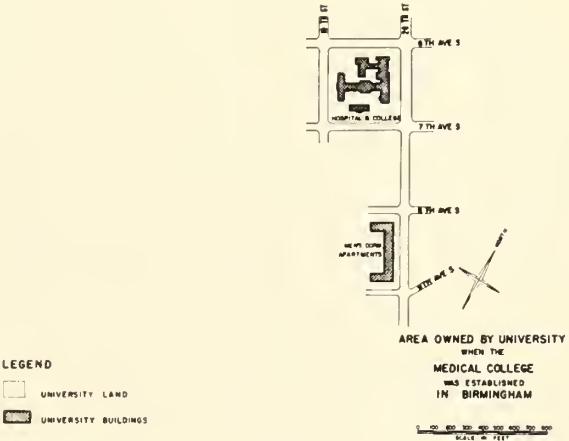


Fig. 6

The hospital complex had been developed in four steps. First in 1882 a charity hospital was built. In 1928 a rather large wing was added to this hospital and a residence for student nurses built. In 1936 the clinic building was completed. And in 1940 the 17 story Jefferson building was completed, designed primarily as a hospital for private patients.

All departments of the Medical College operated in various locations within this complex of buildings, none of which was designed for any such educational purpose. And in 1948 the School of Dentistry was created and operated in the same buildings.

In 1951 a second stage was completed. The buildings for the basic science departments and the dental clinic were made possible by the Legislature, were designed for their educational function and were occupied in that year. (At the same time the size of the Medical College class was increased from 52 to 80.) This second stage is shown in Fig. 7.

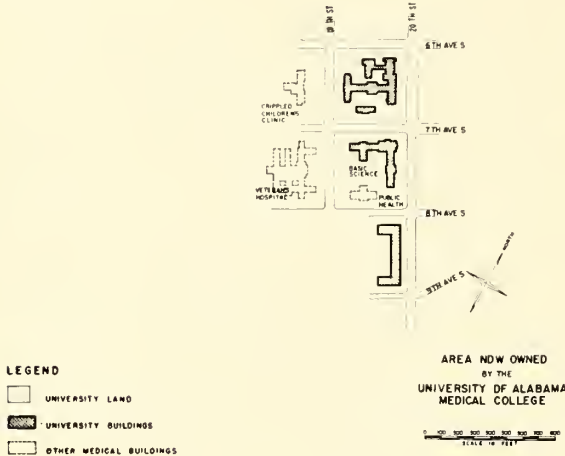


Fig. 7

At approximately the same time the other medical buildings outlined in the figure were completed and occupied. They are the Public Health Building, the Birmingham Veterans Hospital and the Crippled Children's Clinic. These are owned by other agencies but the program of each of these facilities has important relations with the program of the Medical College.

The ground was laid for the third stage in 1953. At that time the Housing Authority of the Birmingham District began the acquisition of a tract of slum land, known to them as Site A. Usually the Housing Authority is concerned with slum clearance and the development of low cost housing. In this instance, from the beginning, the objective has been the development of all the facilities that go into a great medical center. Certainly this is the first time this agency of the Federal Government has undertaken such a development and it may be the only example in the country. In the discussions and deliberations that resulted in this program, the leadership of Dr. James J. Durrett, then Dean of the Medical College, now consultant to the President, was very important. Fig. 8 shows the tract of land being acquired by the Housing Authority.

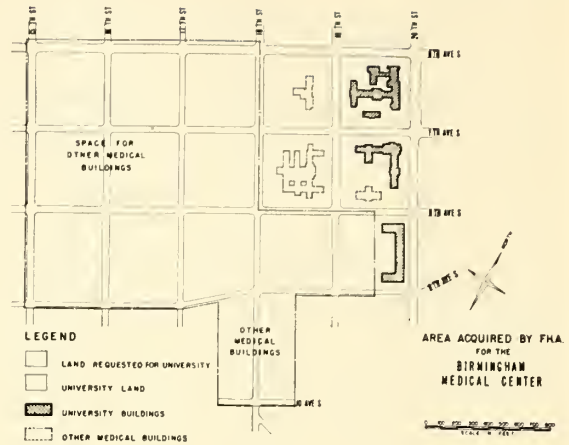


Fig. 8

This tract includes eleven and one-half blocks of city property.

Naturally the University has devoted much time and study to the question of what portions of this land should be acquired and developed by the University.

I am happy to say that the Housing Authority and the City Commission are in complete agreement that the University should have an opportunity to purchase this land and develop it.

This additional land for the use of the University is needed for the long range expansion and development of the program of the Medical Center. In addition, there are current and pressing needs for the expansion and improvement of some of the existing facilities.

Among these needed improvements is a markedly enlarged residence for student nurses. Figure 9 shows, in outline, the location and shape of the new residence for student nurses.

One of the major problems in the delivery of medical care throughout the country at the present time is a nationwide shortage of nurses. This shortage is most severe in our own part of the country. The School of Nursing of the University Hospital is one of the very few similar institutions in the state that is able to attract an adequate supply of students anxious to study nursing. At the present time the student nurses are housed in the Nurses' Residence on the hospital block which was completed in 1923. That building is fully occupied. A new class is due to enroll in September of this year and at that time we will have room in the

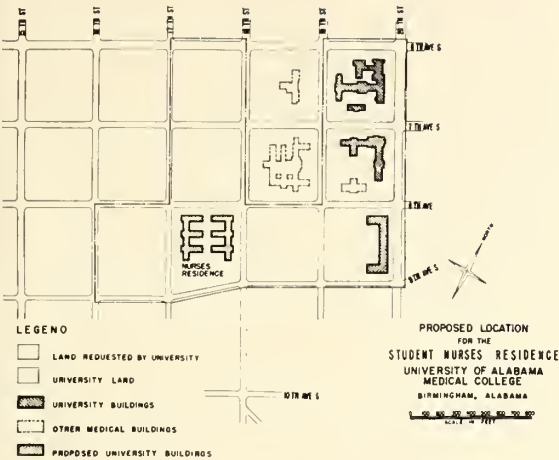


Fig. 9

Nurses' Residence for approximately 60 first-year students. The prospects are that we will have available at that time 90 to 100 perfectly acceptable applicants anxious to study nursing in our institution. We are making every effort to meet this problem on a temporary basis by arranging for the housing of some of our student nurses in other quarters so that we will not have to turn down 30 or 40 promising recruits to the nursing profession this year. All of the indications are that our School of Nursing can continue to attract a far larger entering class than we can now accommodate. In addition, the collegiate program in nursing now being conducted on the Tuscaloosa campus is growing in popularity and an increasing number of students in that program need to come to Birmingham for the clinical phases of their training. The present capacity of our student nurses' residence is approximately 160. There is clear evidence that we need suitable housing for a total of at least 450 students in this category as soon as that can be achieved.

The second portion of our facilities that is in urgent need of improvement and expansion is the facility for the care of ambulant patients. The present clinic building located on the hospital block was completed in 1936. That building was designed and was adequate for a clinic program seeing approximately 40,000 patients per year. However, during the 20 years that that building has been in operation the patient load in the clinic has steadily risen to the point that last year the clinic and emergency rooms had 155,000 patient visits. This has resulted in a condition of crowding and inefficiency that makes it extremely diffi-

cult to provide these indigent patients with the study and care that they need. In addition, the last 20 years have seen the development of many additional services to ambulant patients that have proven their merit. Our present clinic has no facilities for physiotherapy, occupational therapy, social service, speech therapy, psychological testing, or several other special services that are clearly desirable. Figure 10 shows the location and general outline of the new facility for the care of clinic patients that is urgently needed.

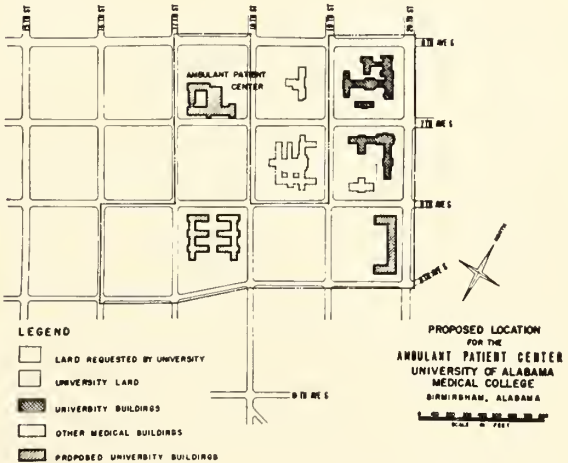


Fig. 10

This facility will be designed for future expansion and with the possibility of being intimately attached to other medical institutions as they come into existence.

Our third current and pressing need is for expansion and improvement in the academic facilities available to the clinical departments in the Medical College and some expansion in the research space available to the preclinical departments. In addition, it is extremely desirable that all of the departments of the Medical College and the Hospital be brought into as close functional relationship as possible. Figure 11 shows the proposed location and outline of a building designed to meet the need for expansion of research space and academic facilities for the clinical departments.

The clinical departments are now crowded into improvised space in the buildings originally designed many years ago as a charity hospital. Their full growth and development are seriously handicapped by the inadequacy of their facilities for research, conference rooms and office space. When

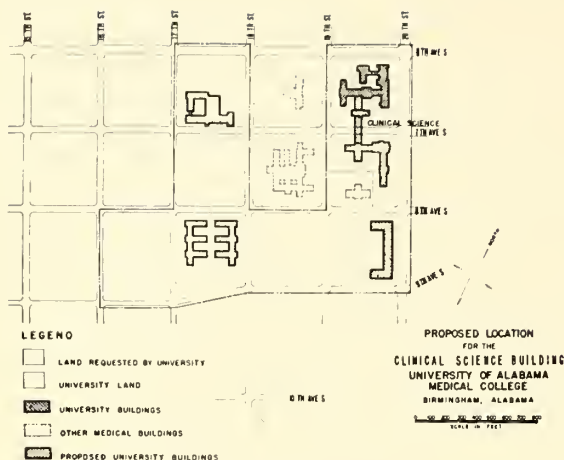


Fig. 11

this building can be realized, the basic science departments will be brought into intimate relation with the clinical departments and connected with the Hospital. For example, it will then be 206 feet from the front door of the Basic Science Building to the back elevators in the University Hospital. As a part of this particular development, we hope to realize the creation of adequate facilities for our Medical Center Library, including a wing to house the very fine collection of valuable historical medical literature offered to the Medical Library by Dr. Lawrence Reynolds.

This building making adequate provision for research facilities, the full development of the clinical departments and the Library holds very great promise indeed for being a means of improving the educational program for all our students and, in that way, the health of all the people of this state in the future.

SERVICE PROGRAM

Patients and their problems constitute the subject matter of medicine and it follows that the University needs, as a part of its educational program in medicine, a setting in which the patients and their problems are receiving the most thorough and considerate study and care. It was for that reason that it was arranged for the Jefferson-Hillman Hospital to be turned over to the University at the time the four-year medical college was established in Birmingham. Over the years the Jefferson-Hillman Hospital had developed as the primary and major source for the care of the sick poor in hospitals and clinics in this large metropolitan county.

The University Hospital was constructed in three stages—a portion completed in 1888 and a portion completed in 1928, both designed and used as a charity hospital, and a portion completed in 1940 that was designed as a separate hospital for private patients. No part of its plant was designed and constructed for its present crucial role in the educational program. Since the 1940 portion was completed, almost no capital funds have been available to improve the physical plant, and each year since then the operating budget of the Hospital has been so burdened with indigent care that it has not been possible to keep up with needed maintenance. A careful and expert study of this has recently been completed which indicates that it will require the outlay of approximately two million dollars to bring the maintenance of the Hospital up to a reasonable norm, to rearrange some of its functions to fit its present role and modernize its physical plant. This figure may seem large, but it should be borne in mind that it is usual hospital practice to expend from six to ten per cent of the annual budget in maintaining and improving the physical plant. Ten per cent of the current annual budget of the Hospital comes to \$384,000, and for more than ten years it has been necessary to defer most expenditures on the physical plant.

At the time that the Hospital was transferred from Jefferson county to the University, the county and the University entered a long-term contract under which the University supplies, through the Hospital, the hospital and clinic care of the indigent patients of Jefferson County, and, in exchange, the county meets the cost of this service. Actually, the county has to meet this cost from its general fund and the county's income into this general fund is determined by tax laws. At the present time and for some years back, the county has been levying every tax that it has the power to levy, but the revenues to its general fund have never been anything like adequate to meet the true cost of the medical care of its indigent.

Under the terms of the contract, each year negotiations result in the University agreeing to supply a given number of patient days of care to indigent patients with the county reimbursing the University at a specific cost per patient day. During the existence

of this contract, it has never been possible for the county to contract for either a sufficient number of patient days of care or to pay for them at a rate close to the true cost to the University. Figure 12 shows the county's payment per patient day and the hospital's actual audited cost per patient day for the last several years.

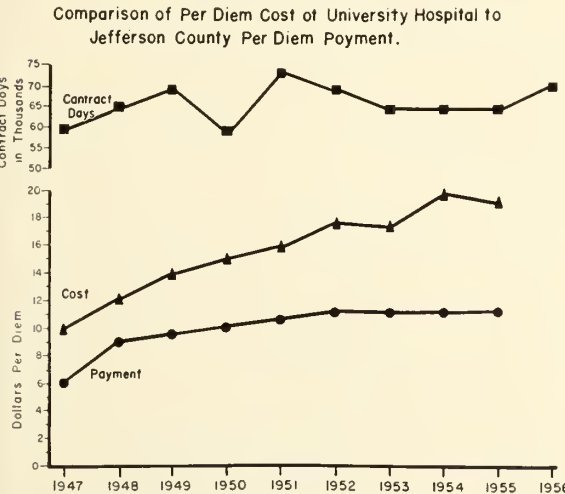


Fig. 12

This has naturally had the result that in each year the University has had to absorb a substantial loss in the services that it renders to the indigent each day they are in the Hospital. In the aggregate this has amounted to a very large deficit for the Hospital each year. The total cost to the Hospital for the indigent care program in excess of the payments made by the county is shown in Figure 13.

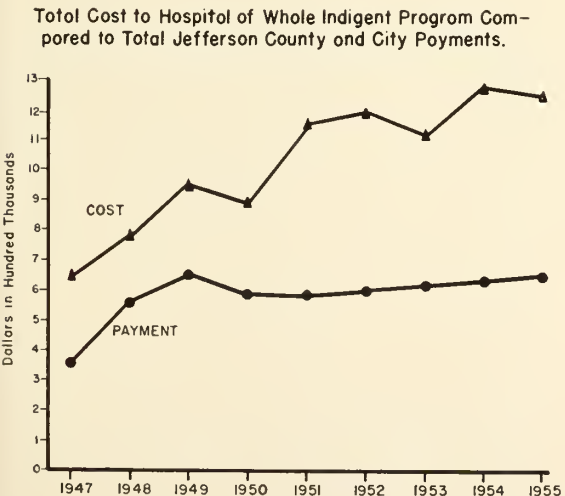


Fig. 13

The burden of absorbing this staggering deficit each year has fallen entirely upon the Hospital. The Hospital has no endowment and it is not legally possible for the University to transfer funds to the Hospital that were not appropriated for that purpose. Absorbing this very large deficit has made it extremely difficult for the Hospital to maintain the quality of its services to all of its patients at anything like the level that all of us would desire.

The administration, employees and staff of the Hospital deserve great credit for the fact that the Hospital is managing to absorb this deficit and is making slow but real progress in improving the quality of its services and program, and taking some small steps to improve its physical facilities.

From the standpoint of the community and the state, the fact that the county has not been able to contract for a sufficient number of patient days of care simply means that the sick poor of this community and its surrounding territory have not been receiving adequate hospital service. Figure 14 shows the number of beds for indigent patients per capita and the financial support of indigent hospitalization per capita in several other Southern cities.

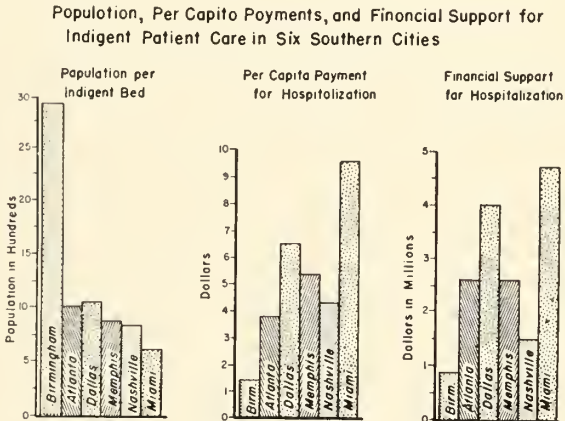


Fig. 14

The fact that only one bed for indigent patients per 3,000 total population is provided in Jefferson County simply means that this community is far behind most of its sister communities in providing for the sick poor.

The intolerable position in which the Hospital is placed by the failure to provide for an adequate quantity of care for indigent patients or to make adequate payment to-

ward the true cost of the care that is provided constitutes the crucial problem of the Hospital, the Medical College and the medical profession in this state. This is the only true university hospital in the country that is at the same time the principal and primary resource for the care of the sick poor in the hospital and clinic. If it is not possible one way or another to provide an adequate quantity of this care, then the community will have to continue to bear a far heavier burden of preventable illness, disability and death than any other large city in the country. If it is not possible through some means to arrange adequate payment toward the true cost of the Hospital in providing this care, the University will be faced with the hard choice of continuing to try to conduct its educational program in a setting in which patients are not receiving the quality of considerate study and care that they deserve, or limiting its services to those quantities of service to indigent patients for which adequate payment can be made.

SUMMARY

For the sake of the best possible health for all the people of the state in the next three decades, it is necessary that we have a numerous, well-informed, highly trained medical profession and an adequate supply of trained paramedical workers in many fields. To this end, it is imperative that the Medical College be sound professionally, educationally, and financially.

The members of this Association are, in spirit, the alumni of the Medical College and make up the front rank of its constituency. There are specific ways in which the members of this Association can be enormously helpful to the Medical College.

The first of these is to do whatever they can to encourage students who have the necessary native ability and interest to pursue their education to become qualified and to seek admission to Medical College.

The second is to lend whatever support they can to getting talented young men and women to prepare for careers in basic science departments and full-time academic careers in clinical departments for the advancement of knowledge, the enrichment of teaching, and the improvement of relations with their colleagues in practice.

The third is to do what they can through the Hill-Burton program to help the Medi-

cal College to get financial support for the construction of the nurses' home, the new clinic and the needed expansion of research facilities and get their elected representatives to provide for the capital needs of the Medical College.

The fourth is to do everything in their power to see that local and state governments make adequate provision to meet the cost of ambulant and hospital care for the sick poor who are already dependent upon the University Hospital and those other indigent patients with specialized problems who live in other parts of the state and whose physicians believe that they should be referred to the University Hospital.

New Artificial Kidney Has Disposable Parts—

A new "tin can and garden hose" artificial kidney has been devised for use among patients with serious kidney failure, three Cleveland doctors reported recently.

Tank and pumps for the kidney cost about \$500 and the inexpensive filtering units are disposable. It works almost as well as the best equipment now available, according to Drs. Willem J. Koliff, Bruno Watschinger, and Victor Vertes. They described it in the August 11 Journal of the American Medical Association.

The mechanical kidney is used to "wash" the blood of patients suffering kidney failure, or uremia, which results in the poisoning of the blood stream by elements usually eliminated in the urine. Dialysis, or "ultra-filtration," of the circulating blood gets rid of these elements and stops the convulsions, nausea, and possibly-fatal results of kidney failure.

The tin-can unit is especially useful since its filter parts can be thrown away after each use, by-passing the usual cleaning, sterilizing, and setting up which take much time.

The filtering unit is made of a 10-ounce fruit can and coils of cellulose tubing separated by fiberglass screens, all set into a larger can. This is sealed for shipping and can be opened with an ordinary can opener when needed.

Blood from a patient's artery circulates through the tubing, which is coiled around the smaller fruit can. Washing solution enters the bottom of this can through a garden hose connection, bubbles up over the top of the can, and flows down through the screened tubing, carrying with it the unwanted elements in the blood. None of the plasma or other essentials in the blood can wash out through the screening. The filtered blood is continually returned to the body through a vein.

The physicians reported eight cases in which the coil kidney was used. Five of them were suffering such severe kidney disease and heart-circulatory disorders that no lasting improvement could be expected, but immediate results were good. Three other patients recovered completely from acute kidney failure including one whose life was probably saved by prompt use of the equipment, the doctors said.

Two Researchers Outline "Phantom Limb" Theories—Nearly every person who loses an arm or leg experiences the same unusual sensation—that the lost limb is still there.

Scientists, who call this the "phantom limb" phenomenon, have been trying to explain it for a century.

One reason they want to understand phantom limbs is fairly obvious: if they know the cause they may be able to help those who suffer severe pain from them.

But one researcher has an even broader reason; she says she knows of "no other set of facts" that offers so many possibilities for revealing things about why normal bodies feel certain ways. An explanation of phantom limbs, she says, may throw light on the way the body learns to move and develop, on the influence of certain social factors on the body, and on the emotional problems involved in various bodily actions.

She and another researcher gave their theories on the cause of phantom limbs in articles in the June Archives of Neurology and Psychiatry, published by the American Medical Association. The researchers are William B. Haber, New York, and Marianne Simmel, Ph. D., Chicago.

They said the phenomenon has often been thought to be caused by sensations aroused in the stump nerve endings, but they believe something more is involved.

Haber said the phenomenon originates in the central nervous system, which includes the brain and spinal cord. This could be due to either of two things: from birth the central nervous system "expects" certain feelings from the parts of the body, or else it learns to have sensations from the parts of the body and remembers these feelings even after a part is lost.

The similarity of phantom limb sensations in 24 World War II veterans who each lost an arm supports his theory, he said, because it rules out the possibility that phantoms result from unusual conditions in the stump or special conditions before or after amputation. However, there is insufficient evidence now as to whether the phantom sensations depend more on learned or unlearned factors.

Miss Simmel suggested that the phantoms are products of a "time delay" in the body's learning process. Since the brain is "in the habit" of feeling sensations from nerves in the limb, there may be a lag before it learns not to feel them. This could explain why phantoms are common when the limb is lost suddenly, but rare when the loss is gradual as in the absorption process of leprosy. Lepers who have lost parts of limbs, fingers or noses by this absorption feel no phantom. But when leprosy-damaged parts are removed by surgery, the phantoms appear just as they do among other amputees.

Haber said that all 24 men he studied reported the phantom sensation, with only one calling it painful. Most described the feeling as a mild tingling ("pins and needles," "as if asleep," "vibrating"). The majority felt their phantom now and then; only two felt it constantly and one seldom. Itching was reported by seven men, who felt it strongly enough to scratch nonexistent palms. Throbbing, pulsating, warmth, tense-

ness, clenching, clutching, gripping and numbness were also reported.

All but two said their phantom had "shrunk" over the years, with some saying the phantom hand had either completely entered the stump or was partly fused with it, so that only portions of the hand were felt to be "protruding." This condition is called telescoping. Following amputation a fading or dropping out of certain parts of the phantom, usually the elbow, forearm or wrist, occurs. The parts which have the greatest use and the most nerves—the fingers, thumb and palm—usually are felt for the longest time.

As the parts drop out, the phantom feels disconnected from the rest of the body, "a disturbing state of affairs," according to Miss Simmel. In order to bridge the gap telescoping occurs, with the phantom part moving toward the stump.

Some men told of illusory movement of the phantom, usually an impulsive reaching toward a falling object. Some also had the feeling of penetrating solid matter. This occurred when solid objects occupied the space which would have been occupied by the limb had it not been lost. Then the phantom limb was felt to be occupying the same space as the solid object. Some also felt imprints of watches or rings worn on the limb before its loss.

Haber found no relation between the characteristics of the phantom and the conditions at the time of loss—either in position of the phantom or in the amount of pain. Neither was there any relation between the wearing of an artificial limb and the dimensions, quality or vividness of the phantom sensations.

Haber concluded that the uniformity of sensations among the men supports, but does not prove, the theory that the phantoms originate in the central nervous system. Studies on the presence or absence of phantoms in children who had amputations at a very early age or were born without a limb, might help determine the role played by learning in causing phantoms, he said.

Auto Passengers Advised to Protect Themselves—It's better to lose a friend than to lose your life, according to a health and safety consultant.

Dr. Carl J. Potthoff, in his safety and first aid column in Today's Health, published by the American Medical Association, said people should not take risks with an irresponsible automobile driver, even if it means offending him.

"Although statistics from nationwide experience are not available, it is possible that half or more of nonpedestrian traffic accidents that result in death or permanent injury happen to people whose only error lay in accompanying others who did the driving," he said. "Some of these drivers pay little attention to their responsibility for passengers.

"Sometimes we do not like to reject rides with such drivers; we do not like to remonstrate with the speeder; we do not like to request that a reckless driver stop so that we can leave the car.

"We hesitate to offend him; but he is entirely willing to jeopardize our life.

THE JOURNAL

of the

Medical Association of the State of Alabama

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

Office of Publication

17 Molton Building Montgomery, Ala.

Subscription Price \$3.00 Per Year

September 1956

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GOLDEN ANNIVERSARY SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will celebrate its Golden Anniversary with a special program at the Read House, Chattanooga, Tennessee, Tuesday evening and Wednesday forenoon, October 2-3. This will be a historical and inspirational meeting and will not conflict with the regular annual scientific session at Washington, November 12-15.

A group of physicians from Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee met at the Read House in Chattanooga on October 2-3, 1906 and organized the Southern Medical Association. The founding fathers in the Constitution and By-Laws they adopted at Chattanooga stated that "the exclusive purpose of this Association shall be to develop and foster scientific medicine. . . . It shall not at any time take active part in any economic, political or sectarian questions or concerted movements for securing legislative enactments." It was to be devoted exclusively to scientific medicine. That same Constitution and By-Laws made it necessary for a physician to be a member of his county and state medical societies to be eligible to membership in the Southern Medical Association. All of the above has never been changed. Several years later the physicians who were members of the state and county medical societies in Arkansas, District of Columbia, Kentucky, Maryland, Missouri, North Carolina, Oklahoma, South Carolina, Texas, Virginia and West Virginia were made eligible to membership.

The Golden Anniversary Celebration will begin with a dinner meeting at the Read House, Chattanooga, on Tuesday evening, October 2. A feature of that program will be an address by Dr. R. L. Sanders, Memphis, immediate past-president of the Southern Medical Association, on "Fifty Years of Medicine in the South." Dr. Sanders graduated in medicine at Nashville in 1906, his fifty years of practice running concurrently with the fifty years of the Southern Medical Association. Dr. Dwight H. Murray, Napa, California, President of the American Medical Association, will represent the A. M. A. at the celebration. A feature of the Wednesday, October 3, morning session will be the unveiling of a plaque to be placed in the Read House commemorating the birth of the

Southern Medical Association there fifty years before on that date.

Physicians who are members of their county and state medical societies are most cordially invited to come to this Golden Anniversary Celebration, the celebrating of the fifty years that the Southern Medical Association has been a great force in the advancing of scientific medicine in the South.

ALABAMA PHYSICIANS HONORED

Four orthopedic surgeons have been honored for a combined service of more than a century since the inauguration of Alabama's programs in the interest of crippled children and in the field of vocational rehabilitation. They are Drs. John D. Sherrill and H. Earle

Conwell of Birmingham, Dr. W. C. Hannon of Mobile, and Dr. Marcus Skinner, Selma. Citations were awarded them for their contributions, the presentations being made by Mr. O. F. Wise, director of the Division of Vocational Rehabilitation and Crippled Children's Services of the State Department of Education.

In commenting on the services of the four physicians, the *Birmingham News* of July 25 said: "All are graduates of the University of Alabama, all served in World War I as officers in the Medical Corps, and each has contributed from twenty-five to thirty years of service in the work of rehabilitating Alabama's handicapped."

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THE PUBLIC'S OPINION OF DOCTORS—
PART III

W. A. Dozier, Jr.
Executive Secretary

This is the last in a series which report the findings of a study made for the American Medical Association. This article shall show that perhaps the profession in Alabama and other southern states has a larger job in public relations so far as the economics of practice are concerned.

From the study it was learned that groups which are most critical of doctors' fees and incomes are include lower-income people, southerners, non-white, people without family doctors, and those with only a grade-school education.

On five questions bearing on finances, these groups compared with the general public as follows:

Think that most doctors—	Lower income people	People South	Non-whites	No high school	Have no doctor	Total public
Charge too much	48%	49%	47%	49%	49%	43%
Have raised fees too fast	42	40	43	41	38	35
Charge more to policy holders	33	37	33	34	37	31
Make too much money	44	44	37	42	46	38
Plan to get rich quick	35	38	35	38	36	30

In answer to the question, "Which part of the cost of medical care would you say had gone up in price fastest since World War II—doctor bills, hospital bills, or drug bills?" the following responses were tallied:

	Public	Doctors
Hospital bills	41%	71%
Drug bills	32	24
Doctor bills	9	1
No opinion	18	4

Although the variation is not too great, it is interesting to note that, by and large, the groups most critical of fees were also more critical of the rise in doctors' bills than was the general public. Here are the comparisons:

Think that doctor bills—	Lower income people	People South	Non-whites	No high school	No MD	Total public
Have gone up fastest	13%	10%	11%	9%	12%	9%
Are higher than necessary	11	8	6	6	9	7

It would seem from the above that the profession in the South has a problem that has not been properly met and that thought and effort should be directed toward arriving at a correct solution.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

ARTHRITIS, A MEDICAL COMMONPLACE

A disease that is seldom seen among patients is frequently referred to as a medical curiosity. One malady that most people know about—smallpox—would qualify as such a curiosity, a rarity today. Many persons were its victims a century ago, doctors saw and treated them, and physicians were able to recognize the symptoms of smallpox at a glance. Now, however, cases of this disease in the United States are very few, indeed.

The object of medical science as well as public health, of course, is the maintenance of a healthful environment and provision of care of people, with these results: maximum well-being and as many medical curiosities as possible. Successes in this endeavor have been great, but some diseases have not surrendered despite the onslaughts against them. Arthritis is one example of the diseases which remain medical commonplaces, as opposed to medical curiosities.

This often crippling disease of the joints and muscles has afflicted the human race as well as the animal kingdom for thousands of years. However, as many writers have pointed out, it is small consolation for today's victims that signs of the disease were found in the fossilized bones of a reptile that lived 100 million years ago, or in the spine of the Java man who inhabited the earth 500,000 years ago.

Both the cause and the cure of arthritis remain hidden in the recesses of the body's complex internal processes. However, progress has been made in relieving its aches and pains, as well as in preventing deformity and disability and in correcting crippling conditions.

Arthritis is not the acute type of disease that develops and runs its course in a few days or weeks. Rather, it is the chronic type of ailment, lasting for months and for many years. In fact, it is said to be the most common cause of chronic illness in

America today. Certainly, its importance is undeniable when one considers the estimated 97 million days of work which victims lose each year, or the 500 million dollars in lost wages.

The disease's victims number about 10 million in the United States alone. This estimate is based on various surveys conducted from time to time. For arthritis is not a reportable disease. If it were, the case-reporting records of the Alabama Health Department would reveal a fairly accurate estimate of arthritis incidence in this state. With present information regarding the disease's occurrence, it can be said only that Alabama undoubtedly has its share of the victims' total.

While arthritis may disable temporarily or cripple permanently, it rarely kills its victims. This fact about the disease often gives rise to what a doctor-writer in the April 1956 issue of *Northwest Medicine* calls "public indifference or resignation to the inevitable." This about arthritis, in view of this physician, explains why the disease does not "demand an immediate solution."

The rheumatic diseases, according to one classification, include arthritis, or disorders of the joints, and others, among them bursitis—disorders of the bursae—and myositis and fibrositis, disorders of the muscles and ligaments, respectively. Arthritis, too, has many "faces." But for the most part, our discussion will deal primarily with rheumatoid arthritis. More than one-half or six million of the 10-million total are rheumatoid arthritis victims, according to one estimate. However, another writer tells us that the hypertrophic type of arthritis is far more common than the rheumatoid variety. Despite the conflict in estimates of occurrence, there perhaps would be general agreement that rheumatic arthritis is the more deforming and crippling of the two.

Arthritis has been described as an inflammation of the structures which form a joint. These structures include the bones which meet or come together to form the joint, the cartilage which coats the joint's bony surfaces, as well as the ligaments and other

tissues which form a capsule around the bone endings and the synovial tissue, which is the name given to the lining of the joint.

Each form of arthritis affects these structures differently. The effects may be actual changes in the nature of the structures, not only of the joints but of other body parts as well.

What effects does rheumatoid arthritis have on the joints in particular and the body in general? Claiming more women than men as its victims, it may cause only mild aches and swellings for some. But for many others, the condition may progress to twisted, bent and useless joints. While the affliction can occur in any person, its beginnings are usually observed in persons of early middle age.

It may come as a surprise to many people to learn that poor appetite and loss of weight may be among the first signs marking the onset of rheumatoid arthritis. These symptoms, as well as stiffness and various aches, may hang on for several months. It is at this point that inflammation puts in its first appearance.

The outer skin above the joint may appear thickened and inflamed. And beneath the skin's surface, lumps or nodules, resulting from the inflammation, may be observed.

At this point, the victim is beset by pain, which is aggravated by lifting and other movements. Moreover, the tissue surrounding the joint may feel warm to the touch. Although the victim cannot see it, an increase in the amount of fluid in the affected joint has been observed sometimes.

Rheumatoid arthritis may affect any joint in the body. But it seems that the larger joints of the extremities—the legs and the arms—are often singled out. The small joints of the hands and fingers are frequently involved, as well. Another interesting but as yet unexplained development is that the same joints on both sides of the body are frequently affected.

The initial stiffness in rheumatoid arthritis may be felt all the time, but most victims report that it is particularly acute on awakening in the morning. Thus, getting dressed—combing hair, washing the face—may become a difficult task.

Like some other diseases, many cases of arthritis are characterized by spontaneous remissions, or periods of freedom from the

pains and stiffness. In fact, some remissions may be more or less permanent; the patient has an initial attack, which may last a year or so, but then he may be free of the disease for the remainder of his life. On the other hand, some cases are relatively severe from the beginning. And unfortunately, arthritis' most common course is one of relentless progress to some degree of deformity and disability, if effective treatment does not intervene.

The pain and swelling, of course, are obvious to the arthritis victim. But what he cannot see and may not realize are the changes which are taking place in the joint structure, or the natural responses of the body to stresses of this kind. And these developments, of course, are more important where his future well-being is concerned.

As rheumatoid arthritis progresses, a thickened growth of the joint lining occurs. Then much like water erodes land and stone, this growth appears to wear the layer of cartilage tissue covering the bone endings. And once this layer is worn thin, the exposed bone itself comes in for its share of erosion. This action of the thickened growth gives every appearance of actually chewing out sections of the bone.

Another factor in arthritis' disabling and deforming effects is muscle spasm. This is one of the body's normal protective mechanisms when inflammation occurs anywhere. As a result, the joints give or bend, as the flexing muscles move to bring injured arms or legs closer to the body trunk for protection. The arthritis victim, then, tends to keep his fingers, elbows or knees bent to avoid pain.

If muscle spasm persists, if the knees, fingers and elbows remain bent, the victim usually finds that it becomes increasingly hard to straighten the affected extremity. The reason is that the muscles adjust to the bent position: they may waste away and become permanently shortened.

The preceding description of arthritis' progress pinpoints distinct possibilities for victims. But they are by no means inevitable in many cases. In fact, the most important aspect of the disease is that much of the disability and deformity can be prevented, or any changes that are already present may be reversed.

Prevention and reversibility, however,

can only come through competent medical treatment. Neglect certainly does not improve the victim's chances. The goals in treatment are three: treatment of the inflammation, the prevention of deformity and disability, and the correction of any deformity and disability that already exist.

Despite the fact that neither the cause nor the cure of arthritis is known, treatment efforts directed toward these goals have met with some success. By far, the greatest amount of publicity goes to the agents which have been discovered to be effective in suppressing inflammation and relieving pain. An editorial in the March 1955 issue of the *Journal of the Michigan State Medical Society* states that arthritis patients are constantly on the alert for new "miracle" drugs, and that they are willing to try any advertised remedies which promise relief from aches and pain. And still another writer, Stephen M. Spencer in his book *Wonders of Modern Medicine*, says that treatment agents "have ranged alphabetically from aspirin . . . to x-rays."

Actually, the treatment of arthritis, as is the case with many other ailments, is a highly individual matter. The treatment schedule must be worked out by the doctor with each patient separately. The agent that relieves pain for one victim might not do so for another. Moreover, treatment is usually a long process. For rheumatoid arthritis may be characterized by periods of freedom from symptoms, or the spontaneous remissions we mentioned earlier. Thus, an agent administered to a patient for only a few weeks, for example, might be mistakenly credited with effectiveness, when in reality a period of freedom from symptoms, which might have been expected to occur with or without treatment, might have developed.

Aspirin and other salicylates were among the first agents used to relieve arthritis' pain and inflammation. In fact, they are still used. Other agents which have maintained their effectiveness over long periods, with varying doses for various patients, are gold compounds and the newer adrenal hormones. Cortisone is perhaps the best known of this latter group.

To prevent and correct deformity and disability, various physical measures are employed. These include local heat, massage and exercises, and have as their goal the strengthening of weakened muscles, as well

as the stretching of tightened tissues. Surgery may be needed to restore proper length to muscles or to correct joint surfaces which have become distorted. However, if the damage is great, even surgery is not always satisfactory.

The doctor we mentioned earlier, writing in *Northwest Medicine*, is of the opinion that arthritis will become a medical curiosity only when the cause is known and preventive steps, based on this knowledge, are outlined. Current research into the various aspects of the disease may provide just such needed information.

In the meantime, patients with arthritis can be helped to understand the importance of receiving competent medical treatment. Their best hope of avoiding deformity as well as disability is early and continued care from physicians, as opposed to self treatment with often useless and expensive agents.

New Vaccine Reduces Rate of Grippe-Like Illness—A new vaccine, developed to combat certain respiratory diseases, was found in a recent preliminary study to reduce the expected rate of illness by more than half, four researchers have reported.

The vaccine, developed at the National Institute of Allergy and Infectious Diseases, Bethesda, Md., was made of types 3, 4, and 7 adenoviruses, which cause acute feverish respiratory diseases. These diseases resemble grippe and are not of the "common cold" variety.

The vaccine was given to approximately 4,000 recruits at the U. S. Naval Training Center, Great Lakes, Ill., between January and April, 1956. These men plus 12,000 others who did not receive the vaccine were observed for the occurrence of the diseases. From 50 to 70 per cent of the expected number of illnesses were prevented by the vaccine, the researchers said in the August 18 *Journal of the American Medical Association*.

Most of the illnesses that occurred in the group not receiving vaccine were caused by type 4 adenovirus. Types 3 and 7 were not prevalent during the period of the study. These three types of adenovirus, formerly designated as APC viruses, occur most frequently in military persons.

Each recruit was given one shot of the vaccine. None developed side-reactions and all developed antibodies against the three types of virus.

The authors pointed out that the vaccine used in the study was the first prepared on a commercial scale and perhaps more potent products will be developed later. They observed that the use of the vaccine may reduce "the usual interference with military training routine" resulting from acute feverish respiratory illnesses. It is also possible, they said, that vaccination of part of the recruits might produce "herd immunity" sufficient to completely prevent outbreaks of respiratory illnesses among recruits.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

October 1956

No. 4

THE ROLE OF PYRAZINAMIDE IN THE CHEMOTHERAPY OF CHRONIC PULMONARY TUBERCULOSIS

A CLINICAL EVALUATION OF 39 CASES TREATED WITH ROTATION THERAPY

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Pyrazinamide and isoniazid in combination have been clearly demonstrated by several groups of investigators to show the most potent antituberculosis activity of any of the presently used drugs in the chemotherapy of pulmonary tuberculosis in man.^{1, 2, 3} However, because of the toxicity of pyrazinamide most investigators have concluded that this drug should not be used in cases which may be amenable to conventional chemotherapy. It has also been found that pyrazinamide should not be used

alone for tubercle bacilli develop resistance to this agent rapidly and the results are disappointing;^{3, 4} however, this drug may be used as a protective agent in the performance of pulmonary resection in sputum positive cases where short-term protection is feasible.^{5, 6} The combination of pyrazinamide and isoniazid has also been found ineffective when either isoniazid or pyrazinamide had been administered in the past.³

Pyrazinamide, pyrazinoic acid amide, is a white crystalline powder which is now available in 0.5 gram tablets. This drug was first synthesized in the Lederle Laboratories by Kushner and associates⁷ but is now manufactured by Sharpe & Dohme, a Division of

Read before the Association in annual session, Birmingham, April 20, 1956.

From District One Tuberculosis Sanatorium.

The authors wish to express their appreciation to Dr. Charles E. Lyght, Associate Medical Director of the Medical Division of Merck and Co., Inc., who kindly supplied the pyrazinamide used in this study.

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Merck & Company, Inc. This drug was first shown to have an antituberculosis effect in experimental animals by Dessau and co-workers⁸ and by Malone and his associates⁹ who used mice and guinea pigs respectively. Yeager and his group⁴ were the first to use this drug alone in the treatment of human tuberculosis; they noted that, although the initial results were satisfactory, the end results were poor due to the rapid development of bacillary resistance. The spectacular effects of a combination of isoniazid and pyrazinamide in the chemotherapy of cases of pulmonary tuberculosis that had not been exposed to either drug in the past were first reported by McDermott, Ormond, Muschenheim, Deuschle and McCune, and by Campagna, Calix and Hauser in March 1954.^{2, 10}

PLAN OF INVESTIGATION

The present investigation began in January 1955 and included a group of thirty-nine patients, thirty of whom were classified as having far advanced pulmonary tuberculosis and nine as moderately advanced

PYRAZINAMIDE RESEARCH PROJECT	
Pretreatment Data	
White Males, Ages 21-59.....	16
White Females, Ages 19-59.....	14
Colored Males, Ages 25-37.....	4
Colored Females, Ages 17-59.....	9
Total.....	39

TABLE 1

(Table 1). One-third of these patients were seriously ill. This group was selected because they represented a discouraging number of patients who continued to expectorate tubercle bacilli in spite of having received extensive chemotherapy. For ex-

8. Dessau, F. I.; Yeager, R. L.; Burger, F. J., and Williams, J. H.: Pyrazinamide (Aldinamide) in Experimental Tuberculosis of the Guinea Pig, *Am. Rev. Tuberc.* 65: 519-522 (May) 1952.

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ample, all but three of these patients had received long courses of isoniazid, and all had received streptomycin during the course of their illness. Most of the patients had also been given PAS. Interestingly

PYRAZINAMIDE RESEARCH PROJECT	
Pretreatment Data	
1. Isoniazid received in the past by all but 3 patients.	
2. PZA received by 5 patients.	
3. Streptomycin received by all patients.	
4. PAS received by all but 3 patients.	
5. Viomycin received by 22 patients.	

TABLE 2

enough, five of this group had also received pyrazinamide (Table 2).

It was felt by the authors that it might be advantageous to administer pyrazinamide, isoniazid and Viomycin in rotation fashion so as to lessen some of the known toxic effects of pyrazinamide and, at the same time, perhaps obtain results superior to those which one would expect in the treatment of patients who had already received the benefit of isoniazid in the past.

The drugs used were administered in such a way that the patients received pyrazinamide and isoniazid for a two-week period of time; pyrazinamide and Viomycin were then given for two weeks; and finally Viomycin and isoniazid were administered for two weeks before returning to the first pair of drugs. The dosage of pyrazinamide used was 3 gm. daily in divided doses. Isoniazid was administered in the usual dose of 4 milligrams per kilogram of body weight. The dose of Viomycin was 2 grams daily.

Because of the danger of liver toxicity associated with pyrazinamide, liver function tests were done on these patients at monthly intervals during the study. The tests included serum bilirubin, bromosulfthalein excretion, cephalin flocculation, serum protein and A/G ratio. Blood counts and urinalyses were also done at this time. Sensitivity studies, using PAS, streptomycin, isoniazid and Viomycin, were performed at the start and at certain intervals during the study by Dr. Thomas H. Hosty, Director of the Bureau of Laboratories of the Alabama State Health Department. Sensitivity studies to pyrazinamide were not done since it is felt that the results are of no real value.

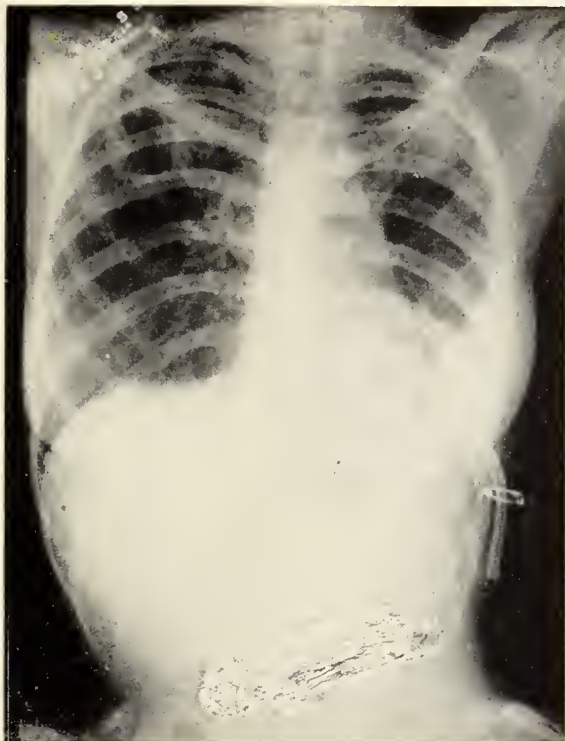


Figure 1A

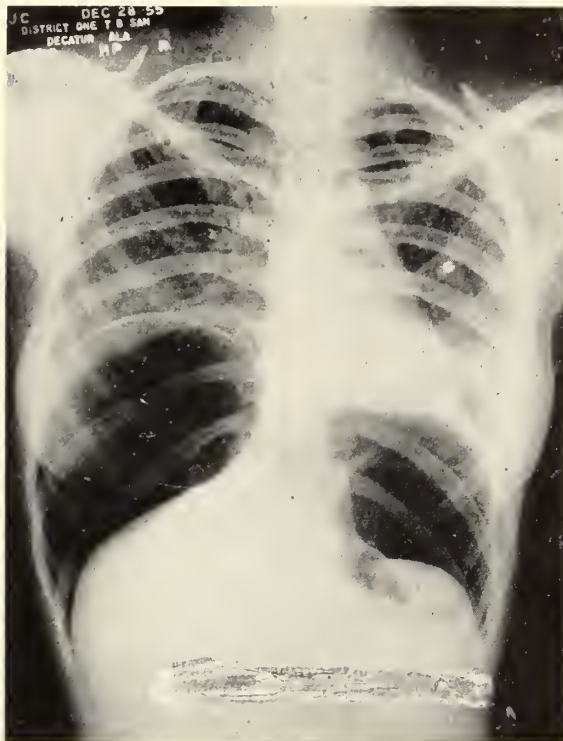


Figure 1B

J. C. is a 20-year old colored girl who was found to have pulmonary tuberculosis in 1951 and admitted to the District No. 1 Tuberculosis Sanatorium in 1952 with extensive disease in both upper lobes (Figure 1A). She had had a recent spontaneous pneumothorax on the left and had developed a tuberculous empyema with a bronchopleural fistula. She was treated with streptomycin, isoniazid, and PAS and a thoracotomy tube and responded fairly well to this regimen. However, the sputum continued to be persistently positive for tubercle bacilli. She was placed on the Pyrazinamide Research Proj-

ect in January 1955. It was possible to remove the tube from the left chest a month later. The cavity in the right upper lobe has closed completely and much of the disease in the left lung has also cleared but there is a persistent cavity in the left upper lobe (Figure 1B). A pneumoperitoneum was instituted in an effort to shrink this cavity. She has been advised to have resection of the left upper lobe cavity, provided pulmonary function studies are adequate but she refuses surgery. Her sputum has been persistently negative by concentrate and culture since March 21, 1955.

RESULTS

Drug Toxicity

The toxic effects observed included anorexia (8 patients), nausea (6 patients), vomiting (2 patients), malaise (4 patients), and myalgia and arthralgia (7 patients). Jaundice and severe hepatic insufficiency occurred in one patient in whom the serum bilirubin increased to 4.9 milligrams and the patient's disease worsened. This patient developed uremia as a late complication and succumbed. Rotation chemotherapy had been administered to this patient for five months. Interestingly enough, another patient in this study who gave a history of alcoholism and had an enlarged liver with a serum bilirubin of 2.2 milligrams at the

start of therapy improved while under therapy so that his liver was no longer palpable and his serum bilirubin decreased to 0.6 milligrams.

Five of the patients in this research project expired. Three of these patients were severely ill at the time that the drug was started; this testifies to the seriousness of the disease in this group of cases. Another of the deaths was a postoperative death in a patient on whom surgery became feasible as a result of this chemotherapy. The other death was due to myocardial infarction. The only patient that was felt to have died as a result of the drug was the seriously ill patient mentioned above who developed hepatic insufficiency with uremia as a late complication and succumbed.



Figure 2A

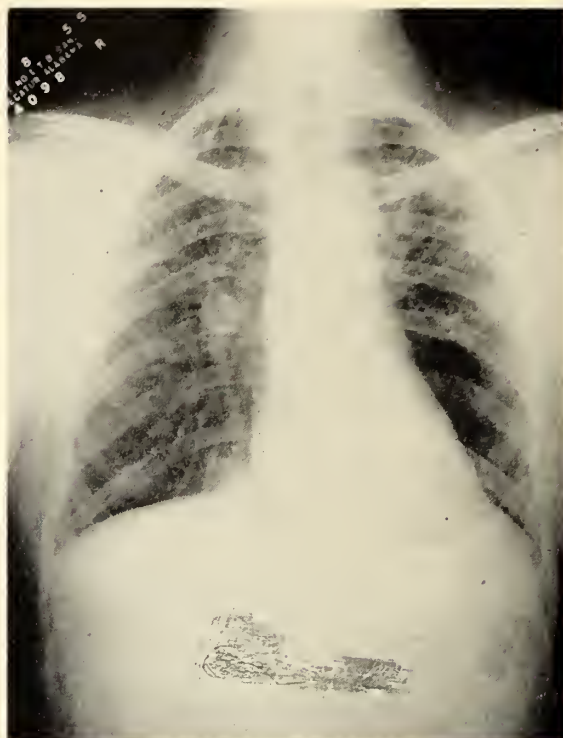


Figure 2C

J. W. is a 21-year old white male who was first admitted to this institution on 9-27-54 soon after he was diagnosed as having miliary pulmonary tuberculosis by a local physician. His chest x-ray on admission showed fine infiltrates involving the upper two-thirds of both lungs, and a large 5 x 4 centimeter cavity in the apex of the left

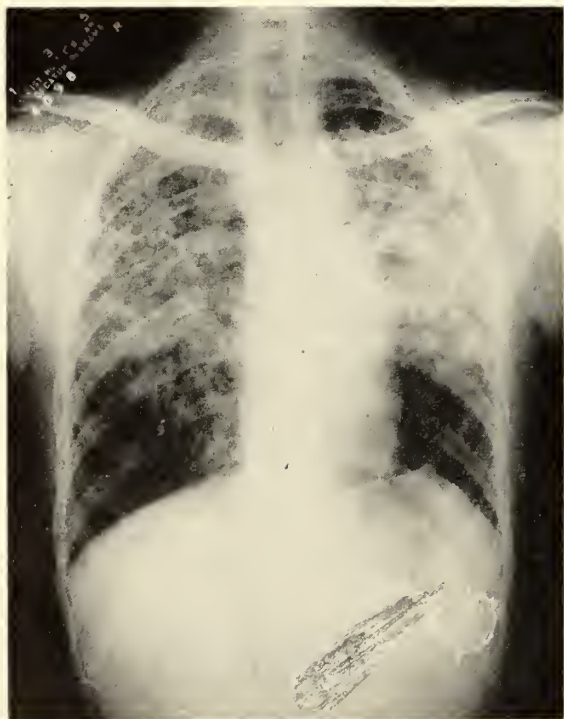


Figure 2B

upper lobe (Figure 2A). He was felt to have protracted disseminated hematogenous pulmonary tuberculosis. When first admitted he was placed on Distrycin, isoniazid and PAS but he continued to have signs of toxicity, such as fever, and continued to lose weight. His sputum remained positive by concentrate and culture, and his cough was harassing and productive. A chest x-ray taken several months after the beginning of this treatment showed worsening of his disease. (Figure 2B). Because of this he was placed on the PZA Research Project. His weight increased from 98 pounds on admission to 160 pounds, and his chest x-rays showed considerable improvement, although rarefactions could still be made out in the left upper lobe (Figure 2C). The patient became absolutely asymptomatic and has remained sputum negative by concentrate and cultures.

Other symptoms that have been described when pyrazinamide was used, such as hemorrhage, difficulty with urination, headaches, etc., were not noted in this group.

ANTITUBERCULOSIS ACTIVITY

Sputum conversion to negative by concentrate and culture occurred in thirteen of the thirty-nine patients in this series (Table 3). It should be emphasized that series of concentrates and cultures for tubercle bacilli was performed at six-week intervals since the study began on the patients who were hospitalized and at the same intervals

PYRAZINAMIDE RESEARCH PROJECT	
Clinical Results	
39 Patients in Study	
Sputum Conversion to Negative (by con. and culture)	13 33%
Only 3 of above patients had not received INH previously.	
PZA had not been received by any of above before this study.	

TABLE 3

on those discharged when they were available. All of the negative patients have had an extensive number of negative examinations. At least three other patients have become negative by smear but continue to have occasional positive cultures for tubercle bacilli and because of this they are not "counted" as negative.

Tubercle bacilli could not be cultured from thirteen of the thirty-nine patients in spite of the fact that cavities persisted in some of them; this indicates a high degree of continuing antituberculosis action.

Of the cases that became sputum negative, three became asymptomatic in so far as cough and expectoration were concerned, and seven others showed moderate improvement in the amount of sputum expectorated and a definite decrease in cough. Eight of the patients that failed to convert also re-

PYRAZINAMIDE RESEARCH PROJECT			
Clinical Results			
	Worsened	Decreased	N. C.
Cough	3	17	20
Expectoration	3	18	19
Weight	18	14	8

TABLE 4

ported decrease in expectoration and cough (Table 4).

Marked or moderate chest x-ray improvement was seen in seven of the thirteen cases who became sputum negative. Five of these cases showed no changes in the

PYRAZINAMIDE RESEARCH PROJECT	
Roentgenologic Observations	
No Change	17
Slight Improvement	5
Moderate Improvement	7
Marked Improvement	4
Worsened	6

TABLE 5

chest x-ray and another was felt to show slight improvement. Of the twenty-six cases that failed to convert to negative, seven nevertheless showed definite improvement in their chest x-ray, and cavity closure occurred in two (Table 5).

DISCUSSION

The present day management of a recently discovered case of pulmonary tuberculosis is satisfactory, particularly when the disease is found before extensive damage has occurred. These new cases are usually caused by tubercle bacilli susceptible to the newer drugs. Cooperative patients who follow sound medical advice usually recover from their disease and can be rehabilitated to a useful life. Other patients whose disease is already advanced can also be successfully managed even though some may have experienced destructive lung changes and thoracic surgery is required to achieve complete recovery. Often one is surprised in the management of cases with considerable pulmonary destruction for many proceed to close large cavities and become sputum negative with chemotherapy alone. In these cases it is revealing to compare the initial chest x-ray showing extensive destruction with films taken after adequate treatment for the latter often appear quite normal.

The group of patients reported in this investigation were not as fortunate as those mentioned in that they had remained sputum positive and infectious in spite of extensive treatment with most of the presently available drugs against tuberculosis. The sanatorium stay for this group averaged 33.7 months; one of these patients has been in this institution for seven years and another for six and one-half years.

Since many of the patients included in this study had previous admissions to the sanatorium, this average figure is actually higher. Thus, although they had shown good faith in submitting themselves to adequate sanatorium care, they remained dangerous public health problems for their tubercle bacilli were highly resistant to the commonly used drugs against tuberculosis. Surgery was not feasible in most of these patients because of factors such as advanced age, extensiveness of the disease, poor pulmonary function studies, other evidence of impaired health, etc. Since these patients are dangerous to the public at large it is

necessary to advise isolation in a sanatorium in order to protect the general public.

Pyrazinamide and isoniazid make up the most powerful combination of drugs now available to treat tuberculosis but should be used in cases that have not received either drug in the past and that appear to offer a serious therapeutic challenge. The use of pyrazinamide is associated with a toxic hepatitis heralded by jaundice which is said to occur in 4 per cent of the cases that receive this drug^{11, 12} and one should therefore carefully weigh the advantages of its use in a particular case. It is felt by us that beginning toxicity to this agent can be predicted by increase in the serum bilirubin alone and that this test should be performed at weekly intervals and whenever jaundice is suspected. The ordinary case should receive the conventional chemotherapeutic agents in pairs and in the dosages recommended by the U. S. Public Health Service. Rotation chemotherapy, if it is used at all, should be reserved for moderately and far advanced cases that have already received extensive courses of the usual drugs in the past and that continue to have a persistently positive sputum.

After this project began it was noted that C. L. Joiner et al. reported in the October (1954) issue of the *Lancet*¹³ that isoniazid, PAS, and streptomycin produced a progressive improvement in their patients, when used in rotation, that was not equaled when any one of the drugs was used continuously. Thus, the rotation chemotherapy scheme in the treatment of tuberculosis has been used by others who were not using the same drugs that were used in this study.

CONCLUSIONS

A combination of pyrazinamide, isoniazid and Viomycin has been used in the treatment of thirty far advanced and nine moderately advanced cases of pulmonary tuberculosis that continued to have a positive

sputum in spite of adequate chemotherapy with other drugs such as streptomycin, isoniazid, and para-aminosalicylic acid. Five of the patients in this study had received pyrazinamide in the past and all but three had also received isoniazid. Streptomycin had been given to all and most of them had also received para-aminosalicylic acid.

The three drugs used in this study were administered in combinations of two drugs at a time for a two-week period; the pair of drugs used was changed every two weeks in order to avoid the use of pyrazinamide continuously. The therapy as outlined was maintained for approximately six months.

Sputum conversion to negative, by concentrate and culture, has occurred in thirteen of the thirty-nine patients, thirty-three per cent; and of these patients, nine can now be classified as inactive. One death occurred in this group as a direct result of the hepatotoxic effect of pyrazinamide.

The present study demonstrates that pyrazinamide can be made effective in patients who have received pyrazinamide or isoniazid in the past by the use of a rotation chemotherapy scheme. It is emphasized however, that the use of pyrazinamide should be reserved for seriously ill patients who have not responded to the usual chemotherapy.

ADDITIONAL REFERENCE

Tarshis, M. S., and Weed, W. A., Jr.: Lack of Significant In Vitro Sensitivity of *Mycobacterium Tuberculosis* to Pyrazinamide on Three Different Solid Media, *Am. Rev. Tuberc.* 67: 391-395 (March) '53.

The finding that 7.2 per cent of the patients in a tuberculosis sanatorium have "serologically proved" histoplasmosis and that the actual presence of the microorganism was demonstrated in 33 per cent of the cases is indeed remarkable. It certainly calls for very serious consideration of the importance of histoplasmosis in tuberculosis sanatoriums.—*Michael L. Furcolow and Charles A. Brasher, M. D., Am. Rev. Tuberc., May 1956.*

11. Robinson, H. J.; Siegel, Henry, and Pietrowski, J. J.: Toxicity of Pyrazinamide, *Am. Rev. Tuberc.* 70: 423-429 (September) 1954.

12. Hepatotoxicity of Pyrazinamide (PZA): Quarterly Progress Report, V. A., Army & Navy Study on Chemotherapy of Tuberc.: 13-15 (July) 1954.

13. Joiner, C. L.; McLean, K. S.; Carroll, J. D.; Marsh, K.; Collard, Patrick, and Knox, Robert: Isoniazid and P. A. S. in Chronic Pulmonary Tuberculosis, A Warning, *Lancet*: 663-666 (October) 1954.

Coccidioidomycosis, which was known up to a decade ago mainly to physicians and mycologists working in the endemic area, must now be seriously considered in the differential diagnosis of chronic pulmonary lesions in nonendemic areas. Because of the great numbers of military personnel who were stationed in endemic areas during and after World War II, a widespread scattering of the disease occurred, although the area itself apparently showed no signs of expanding.—*Denis J. O'Leary, M. D. and Francis J. Curry, M. D., Am. Rev. Tuberc., April 1956.*

SCHILDER'S ENCEPHALITIS

REPORT OF CASE

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Schilder's encephalitis is not a clearly defined clinical entity. The various synonyms indicate that such is the case: for example, progressive degenerative subcortical encephalopathy; intracerebral centrolobar sclerosis; encephalo-leupathia scleroticans progressiva, etc. The rather frequently used term of diffuse cerebral sclerosis does not denote the subcortical site of the pathology and the demyelinating character of the lesions. The classification of the diffuse scleroses are, as yet, poorly outlined. Types of progressive cerebral sclerosis are: (1) Schilder's encephalitis; (2) aplasia axialis of Pelizaeus and Merzbacher; (3) amaurotic family idiocy; and (4) cerebro-macular degeneration.

Schilder's encephalitis is a rare and progressively fatal disease varying in duration from a few weeks to several years. Acute, subacute and chronic stages can be distinguished. More than 100 cases¹ reported since 1912 have been placed in this category with considerable consistency as to pathologic findings. It is not now included among the familial diseases but as more cases are seen and studied clinically and pathologically it may be so classified. The age² incidence is divided fairly equally among juveniles, adolescents and adults. It is not a malady of infants and the young alone as several have reported cases in the 50 to 60-year groups; however, these have been in the minority. A marked familial incidence is observed in the case here reported as the patient and his sister had similar neurologic symptoms.

REPORT OF CASE

A single, 25-year old Marine veteran was admitted unaccompanied to a Veterans Administration Hospital on October 20, 1952. He had no combat service but was stationed in China for about a year and a half. His first nervous symptoms began in 1951, three

months after his return to the States. He became highly nervous, unable to perform his duties, and had difficulty getting along with supervising officers. He was hospitalized for six weeks and discharged in August 1951 for disability.

After returning home he held several jobs, retaining them for short periods of time. He explained his inability to work on the basis of restlessness, inability to concentrate, and insomnia. His appetite was poor, he smoked and drank coffee excessively. In September 1951 he enrolled in a junior college but after six weeks of school was forced to discontinue due to very poor concentration and extreme nervousness.

Systemic review revealed normal findings. Complete blood counts and urinalysis on admission were essentially negative. He was in good contact with his environment, but was tense, anxious, restless, and showed marked preoccupation with sexual and religious topics. He welcomed treatment and cooperated to the best of his ability. He presented a general mood of euphoria, expressed ideas of reference, and thought people were giving him undue attention. His recall of remote experiences was good and of recent past experiences and immediate impressions satisfactory but he was unable to concentrate upon a subject for any length of time. Psychiatric and psychologic studies indicated that originally he was a bright, normal and intelligent person but now his reasoning, judgment and insight were greatly impaired.

Family history revealed patient's birth as normal. However, early in infancy he was a feeding problem, constantly under a doctor's care, and had intermittent attacks of high fever and vomiting. After the age of 4 he improved and his general health became quite normal.

Patient was the eldest of three siblings. A brother 25 is healthy and normal. A sister 8 years his junior had a similar history and was always high strung and nervous. In 1951 she had a fever of unexplainable origin. Laboratory and x-ray tests furnished nothing from which a diagnosis could be established. She recovered from the

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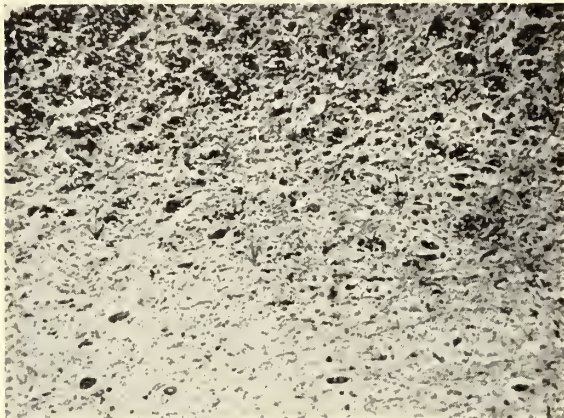
1. Wilson, S. A., and Kinnier, M. A.: Textbook of Neurology, vol. 2, pp. 995-1006.

2. Lichtenstein, Ben W.: Textbook of Neuropathology, p. 86.

fever and returned to high school but completed only six weeks schooling when she became so ill she had to leave school. Hearing seemed normal, but questions had to be repeated. She began to show muscular rigidity in October 1952, was unable to move her arms or legs, but she never complained

of pain. The stiffness increased to the point where she required help with her clothing and was unable to walk. In December 1952, while sitting near a gas burner, her clothing caught fire and she sustained third degree burns but apparently felt no pain. She merely seemed disturbed that her clothing was afire. Three months prior to this accident the family observed loss of sensation of touch. Arms and legs were in rigid extension but she ate well and had no trouble swallowing. Remote memory was good but recent memory began to fail. There were no athetoid movements. She died three days after the accident. Family history, other than that of the patient and his sister, was negative.

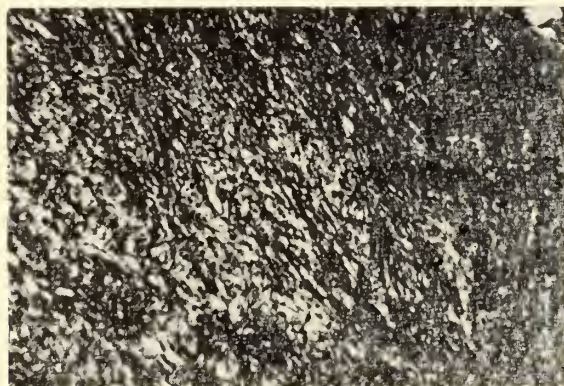
Course: Patient was seen regularly by the Consultant in Neurology. In 1952, after completing a course of combined insulin and electric convulsive treatments, including 64 comas and 9 ECT's, the latter given



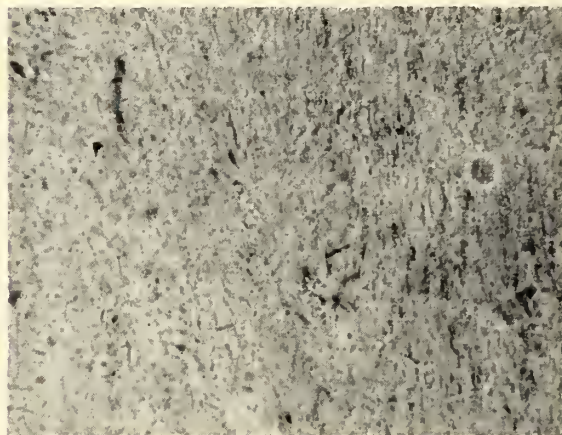
1. White area shows demyelination of the fibers in the pons.



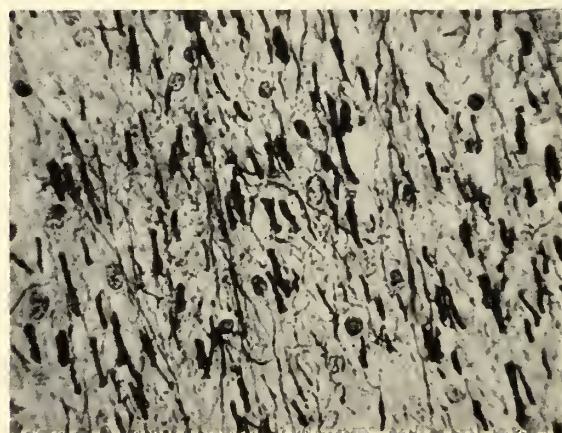
2. Temporal lobe stained for myelin shows fragmenting, swelling and beading of the myelin sheaths. High power.



3. Sections through occipital lobe of normal brain stained for myelin showing normal nerve fibers of the white substance. Low power.

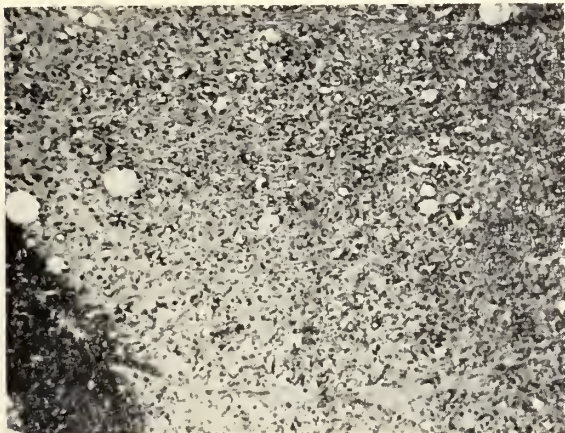


4. Myelin stain showing extensive destruction of the myelin sheaths in occipital lobe. This may be compared with Fig. No. 3.

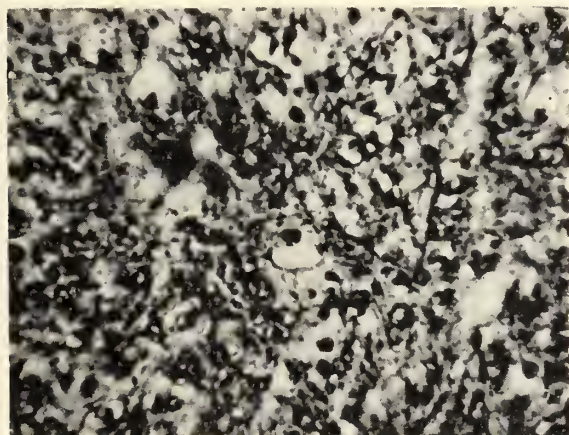


5. Silver stain showing fragmenting and swelling of axon cylinders in the occipital lobe. High power.

intermittently, he was presented again to the neurologic consultant who reported a definite spasticity on the left and Babinski on the right. There was no cranial nerve involvement nor weakness of the face and tongue and no sensory disturbance. It was the consultant's opinion that this, considering the patient's history, indicated definite cerebral disturbance involving the motor pathways largely on the right and mostly cortical. On November 5, 1953 a left foot

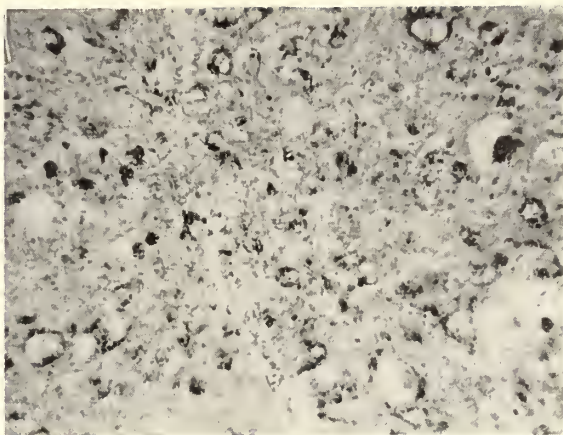


6. Demyelinated area of cord stained for myelin. Low power.

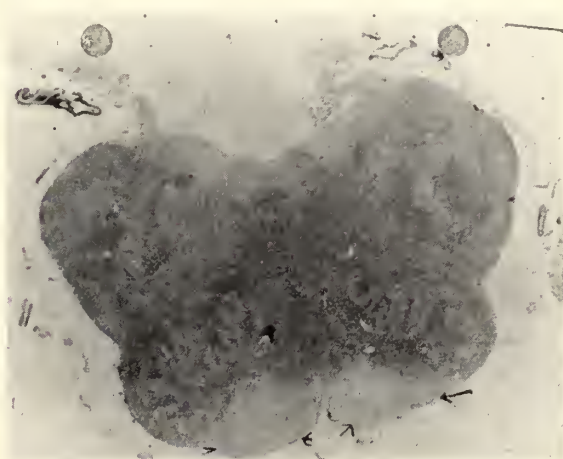


7. Normal spinal cord stained for myelin. High power.

drop was noted and a definite dragging of the toes. A short leg brace was supplied for correction. However, early in January 1954 he began to need assistance in walking. Repeated neurologic examinations revealed progression of the neurologic picture plus mental deterioration. Patient was transferred to the infirmary for treatment and further observation. On November 19, 1954 neurologic examination revealed extensor



8. Demyelinated area of spinal cord. High power.



9. Medulla stained for myelin showing areas of demyelination in the region of the pyramidal tracts.

spasticity of the forearms, more active reflexes on the left side, plantar flexion of the left foot, and extensor response on the right side. The clinical picture was compatible with Schilder's disease and diffuse cerebrogial blastosis. Schilder's disease was considered unlikely as it is not generally considered familial and it was thought there was apparent familial relationship in the patient's illness and that of his sister. Amyotrophic lateral sclerosis, multiple sclerosis, and cerebral neurosyphilis were ruled out.

On March 5, 1955 the patient was sent to the medical ward as he was running a high fever and his white count was greatly elevated. X-rays of the chest showed diffuse hazing at the right base. Medication was given for 72 hours but the fever continued to run as high as 105 degrees. He made a good recovery from this episode of

pneumonia but experienced at least three bouts of high fever and pneumonia within the ensuing four months from which he recovered with treatment. The neurologic condition was progressive. He became unable to swallow. There was marked atrophy as well as spasticity of all voluntary muscles, especially of the upper extremities. His white blood count rose as high as 18,800. He continued to lose weight. On the afternoon of July 26, 1955 he developed a diarrhea and passed a small amount of bright red blood from the rectum. He died on July 27, 1955.

Gross Examination

Gross examination of the brain showed the shape, size, color and weight to be preserved. The cerebral hemispheres were symmetrical and equal. On section they showed the usual demarcations between the cortical and subcortical areas. The white matter was pinkish-gray and very firm. The ventricles were not enlarged. The most important finding in the gross examination was the firm rubbery consistency of the white substance. In the occipital lobes there was noted several small rather soft areas. The basal ganglia, hypothalamus, pons and medulla revealed no cystic areas of degeneration nor hemorrhage but had a slightly firmer feeling than that of normal brain tissue.

Microscopic Examination

The outstanding histologic finding was the extensive demyelination in the white area of the cerebral hemispheres. This was most noticeable in the occipital lobe. The U fibers were not involved nor were the fibers adjacent to the ventricles. The demyelination continued through the internal capsule, the lateral aspects of the pons, the ventral tracts of the medulla, and the fibers of the lateral areas of the cord. Demyelination was readily seen by examination of slides held to the light. The destruction of the myelin sheaths was complete in central areas of the occipital lobes, while in other areas at the periphery the sheaths became thin and palely-stained. The nerve fibers under high power showed fragmentation of the myelin, large beads and complete destruction of the fibers. Sections stained for axons showed degeneration of the axons in some areas most marked in the occipital lobes. The axons were swollen, fragmented, tortuous, and in some areas the disappearance was complete. The ganglion

cells in the basal ganglia showed some chromatolysis but the degree of degeneration was not striking. Examination of the pyramidal cells showed some hyperchromatic changes and atrophy but again this was not too noticeable.

The ganglion cells of the medulla showed moderate degenerative changes in the form of atrophy, hyperchromatic changes, and chromatolysis. No inflammatory cells were noted in any of the sections made from the central nervous system. The reaction on the part of the neuroglia may be said to be only a slight reaction. There was a slight increase in astrocytes in number and size, and a slight increase of oligodendrites in the degenerated areas. Very few gitter cells were seen in any of the sections.

COMMENTS

This case, like similar cases heretofore reported, is a typical instance in which diagnosis in the early stages is rarely possible due to the variability of the clinical picture. At the onset of illness symptoms may be purely mental, continuing progressively, then followed by neurologic signs which may be confused with cerebral tumor, insular sclerosis, or forms of encephalitis. One should become suspicious if a neurologic disorder evolves by acute, subacute or chronic stages, and progresses with mental and neurologic symptoms indicating cerebral disturbance of the motor pathways (more or less symmetrical). As a general rule patients have no fever except when complicated by pneumonia or other intercurrent infections but they do manifest evidence of brain disease, with signs such as muscular hypertonicity, spastic paralysis, choreo-athetoid movements and mental deterioration. Laboratory tests, spinal fluid, blood chemistry, blood counts, x-rays of skull, and pneumo-encephalograms are of little value in diagnosis as they are usually negative. Thus, the clinician must rely upon patient's past and present history, mental changes and neurologic signs for diagnosis.

From study of slides on this case it is evident that the major pathologic process is demyelination of the nerve fibers of the cortical pathways. There is no major evidence of degeneration of the ganglion cells in the cerebral cortex, basal ganglia, medulla or cord. The cerebellum appears to have escaped without damage and no inflammatory changes were seen in any of the sec-

tions studied, another proof of the degenerative nature of this disease.

The conclusion is that the etiology of Schilder's encephalitis is unknown. However, the familial incidence may in time give some indication as to etiologic factors. There may be a familial hereditary defect of the cells that nourish the myelin or of the myelin itself, rendering it susceptible to the pathologic process that ensues in the disease, namely, demyelination and sclerosis.

SUMMARY

We believe this case should be included among those diagnosed as Schilder's encephalitis, leuco-encephalopathy diffusa, or diffuse sclerosis. The patient, a veteran, became ill at the age of 25 and the illness continued a relentless course for approximately 3 years. Diagnosis was difficult because the first symptoms were primarily mental,

followed by neurologic signs. It was only after frequent consultations that a diagnosis of Schilder's disease was included in the differential diagnosis.

Clinical signs and symptoms indicated a lesion of the brain involving the cortical pathways. We feel justified in including this case among the familial diseases as the sister of the patient had a similar neurologic disorder. The pathologic findings were indicative of leuco-encephalopathy diffusa (Schilder's encephalitis), as there was diffuse deterioration, partial or complete, of the cortical pathways of the cerebral hemispheres, pons, medulla and cord. It is the writer's opinion that many cases reported as Schilder's encephalitis showing inflammatory changes should have been placed in other categories; that Schilder's encephalitis, a degenerative and familial disease, should be established as a definite entity.

AN OUTLINE FOR THE STUDY OF TRAUMATIC
DISLOCATION OF THE HIP

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and

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MECHANISM OF INJURY

The increase in automobile accidents has brought a considerable increase in the number and severity of traumatic dislocations of the hip. The righthand front seat passenger of an automobile sits with his hips slightly adducted and slightly flexed. This is the ideal position for posterior dislocation of the hip should a sudden stop drive the knees against the dashboard of the car. The posterior-inferior portion of the capsule of the hip joint is the weakest and it is through this area that the head of the femur is driven in posterior dislocations of the hip. The adducted, flexed position is further increased when the knees are crossed, a common change of position used in car riding.

The next most common injury is an industrial one. A stooping coal miner works with his spine flexed and hips flexed. Should a roof cave in or a large mass of rock fall directly on his spine, the pelvic acetabula are shot forward on the femoral heads and a posterior dislocation occurs into the sciatic notch region.

In the above two mechanisms the hip is in

the flexed and adducted position. In the rare anterior dislocation into the obturator foramen, or the pubic crest, similar mechanisms apply similar forces to the abducted hip. The final resting state of the limb is one of abduction, external rotation and extension.

TYPES OF DISLOCATIONS

It is interesting to note that most of our information on dislocations of the hip stems from the classic article by Henry J. Bigelow, Professor of Surgery at Harvard, which was published in 1869. Bigelow first recognized and emphasized the importance of the Y-shaped iliofemoral ligament, which today bears his name. Bigelow classified dislocations in general into "Regular," in which this ligament was intact, and "Irregular," in which the ligament of Bigelow had been ruptured. Bigelow found that, in the "Regular" type, the position of dislocation could be reproduced regularly on a cadaver.

Bigelow likewise used the intact iliofemoral ligament as the pivot point in the designation and reduction of a dislocated hip whether it be of the anterior or posterior

type. These clever physiologic methods have not been improved upon too much to the present day. A satisfactory classification of dislocations of the hip was given by Hippocrates and little can be added to this classification at the present time.

- (1) Posterior
 - (a) Superior . . . over the dorsum ilii.
 - (b) Inferior . . . below the tendon of obturator internus into sciatic notch.
- (2) Anterior
 - (a) Superior type onto the pubic crest.
 - (b) Inferior type into the obturator foramen.
- (3) Central type of dislocation, so-called protrusio acetabuli.

DIAGNOSIS

Diagnosis should be made on the history of serious injury outlined above in the Mechanism of Injury, of which the hip may be only one site. For this reason, because of extensive trauma involved, an A. P. scout film of the pelvis is a MUST in all traumatic

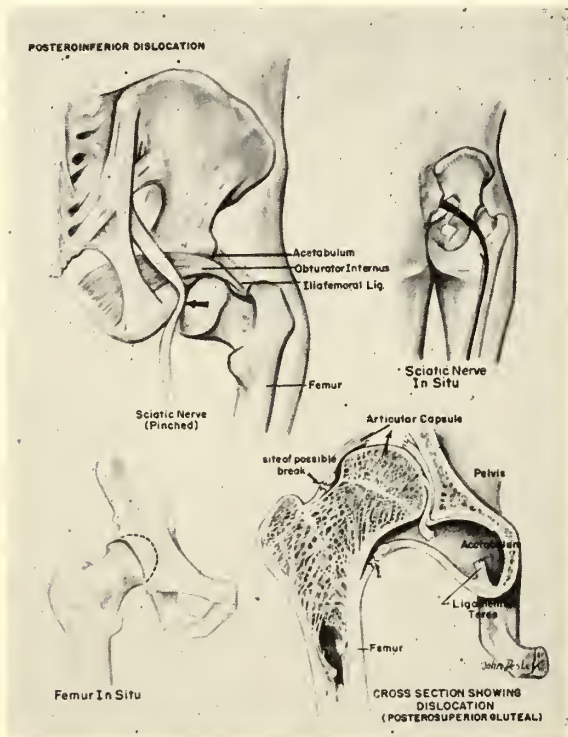


Fig. 1

injuries. As in Figures 1 and 2, the posterior dislocation has typical clinical deformity of adduction, internal rotation and shortening. Anterior dislocations have clinically

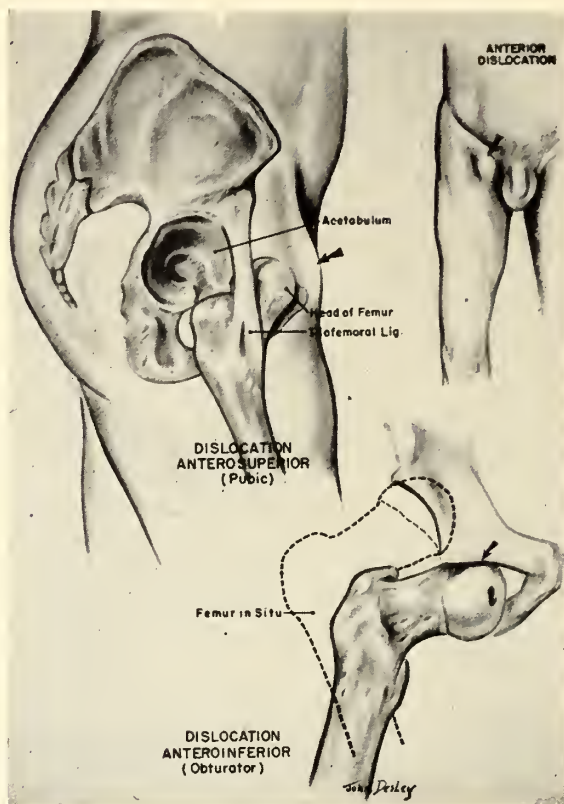


Fig. 2

external rotation, abduction deformity, and slight lengthening. Central dislocations are usually not diagnosed except as some injury to the pelvis, until x-rays can be obtained. X-ray check on all is mandatory, pretreatment and posttreatment.

Closed reduction should be first attempted. As soon as possible, reduction, open or closed, should be gotten. In order to achieve reduction, complete relief of muscle spasm is mandatory. For this reason, spinal anesthesia is the anesthesia of choice unless contraindicated by the patient's condition in general.

The use of curare-like drugs and other anesthetic mixtures, together with curare, is not as satisfactory, in our experience, as spinal anesthesia.

There are many methods for the reduction of dislocation of the hip. Three methods for reduction of dorsal dislocations and two methods for the reduction of anterior dislocations will be given. These are illustrat-

ed in Figures 3, 4 and 5. The following method is according to Bigelow:

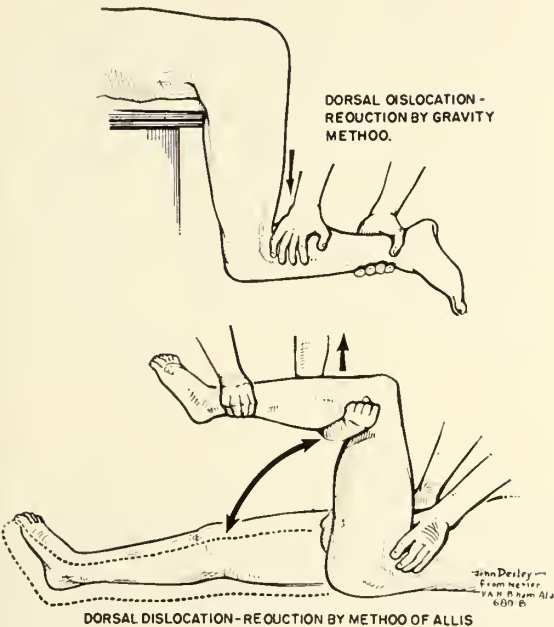


Fig. 3

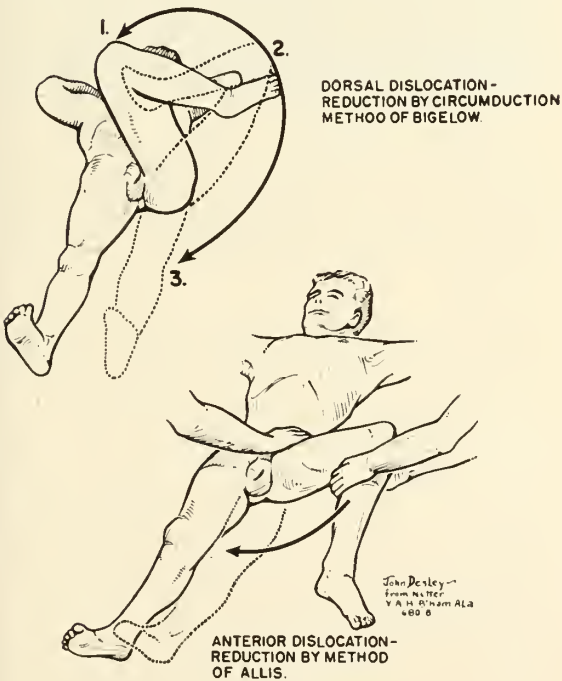


Fig. 4

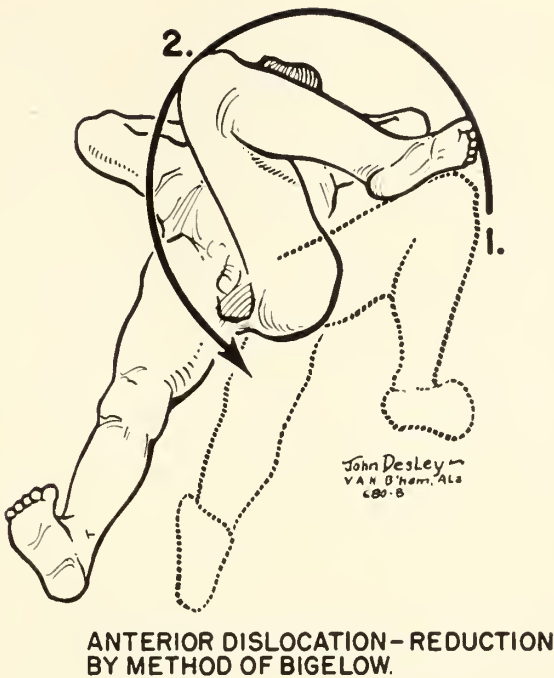


Fig. 5

POSITION OF THE PATIENT AND SURGEON

“The patient should be laid on the floor, that the operator may command the limb to the best advantage, and should be etherized until the muscles of the hip are completely relaxed.

THE Y LIGAMENT, WITH REFERENCE TO REDUCTION AND TO SUBSEQUENT TREATMENT

Except in supraspinous dislocations, the two insertions of the Y ligament are most closely approximated when the thigh is flexed upon the trunk, carried toward the navel, and rotated inward.

But it has happened that, after unsuccessful efforts, a hip has been reduced when semiflexed in the act of extension; which shows that in certain cases the ligament may be needlessly relaxed by the extreme flexion, and may be advantageously drawn tighter by a little extension or outward rotation.

I may here refer, in connection with the subsequent treatment of the patient, to the practical importance of preventing such a relaxation of the anterior ligament, whether by flexing thigh or raising the body to a sitting posture, as may permit a recurrence of luxation. For this purpose, where the bone inclines to slip from the socket after reduction, certain cases may require not only that the thigh should be confined for a time in the position which completed the reduction; namely, for the dorsal luxations, in abduction and eversion, or in vertical extension; for the pubic and thyroid, in a position of inward rotation and adduction: thus taking advantage of the tense ligament to bind the bone to the socket.

HOW THE LIMB IS TO BE HELD

The thigh should be bent upon the body, and the leg at a right angle with the thigh. With one

hand the surgeon grasps the ankle from above, while with the other, placed beneath the head of the tibia, he lifts and guides the limb. In this way, by using the flexed leg as a lever, keeping it always flexed at a right angle for that purpose, great power is brought to bear upon the head of the femur, especially in rotating the thigh. It is therefore important to keep accurate account, during such manipulation, of the position of the head of this bone, which should not be moved at random, or indiscriminately urged when locked, lest it be broken from the shaft; and it may be convenient to remember that in every position the head of the femur faces nearly in the direction of the inner aspect of its internal condyle.

CAPSULAR ORIFICE TO BE ENLARGED

Much stress has been laid by certain writers upon the difficulty of replacing the head when it has escaped by a small aperture in the capsule. That the condition may occasionally occur seems probable; and it is suggested by Gell, in his elaborate paper upon the subject, that, when the slit occurs close to the femoral insertion of the capsular ligament, it may be impossible to replace the head of the bone. This writer, with Malgaigne, Gunn and others, urges the importance of placing the bone in the position it occupied when luxated, with a view to its reentering the socket by exactly retracing its path. But while this path cannot always be known, any difficulty is easily obviated by carrying the head of the bone toward the opposite side of the socket, and thus enlarging the slit: a simple manoeuvre, easily accomplished by circumducting the flexed thigh across the abdomen in a direction opposite to that in which it is desired to lead the head of the bone, which should be made in this way to pass across below the socket, and never, it is needless to say, above it, across the Y ligament. This expedient, of which I have had occasion to avail myself, will, as I believe, be in future generally adopted, when any such difficulty is encountered in reducing the hip. The subcutaneous injury is trifling, in comparison with that resulting from a protracted and ill-planned manipulation or from the brute force of pulleys. It depends for its success upon the strength of the Y ligament, which, in firmly attaching the base of the neck of the femur to the inferior spinous process of the ilium, forms a fulcrum or pivot round which the shaft and the neck of the femur can be made to revolve, like opposite spokes in a wheel; the Y ligament being strong enough to rupture, in this way, the whole of the rest of the capsule and the obturator muscle, without itself yielding.

When a slit has thus been made by circumducting the neck of the bone across the posterior aspect of the capsule, the head of the bone has traversed an interval reaching in some cases from the dorsum to the thyroid foramen, and slips readily from side to side. This laceration already exists in most cases of dorsal dislocation below the tendon, where the head of the bone has reached a secondary position after a previous luxation downward—and is also known to surgeons who have reduced dislocations by the old awkward method of extension, where the bone sometimes slipped many times backward and for-

ward from the dorsum to the foramen ovale; and yet I can find recorded only one instance of this familiar occurrence as being followed by any permanent injury, and even in that case there may have been a predisposition to the hip disease which ensued. It will hereafter be seen that, when the head of the bone has thus been made to slip from side to side, rotation becomes a less efficient manoeuvre for reduction, the bone tending at the critical moment to slip laterally away from the socket instead of into it, especially where the rim of the acetabulum is prominent or the Y ligament is relaxed. It is here that vertical traction, sudden or continued, is especially to be relied on. This will be further explained.

FRACTURE OF THE NECK

Except in a very old subject, no apprehension need be felt of fracture from a tolerably skillful manipulation, or from circumduction with a view to tearing the capsule. The femur has, indeed, in rare instances, been fractured by manipulation as well as by pulleys; and if the head of the bone be forced into a position where it is confined by the Y ligament, and from which it cannot escape, it will be acted upon with great power by the shaft serving as the long arm of a lever if force be still indiscreetly applied.

FLEXION, EXTENSION, ADDUCTION, ABDUCTION, AND ROTATION

Of these terms, the last two alone require notice. If a thigh, abducted at a right angle, be rotated outward with the knee bent, this position of the limb has been sometimes erroneously described as one of flexion. It becomes so only as the knee is brought forward. Rotation is here always intended to apply to the thigh, the inward or outward rotation of which, in a limb bent for reduction, carries the foot in an opposite direction and may thus lead to doubt."

(1) *The So-Called "Gravity Method."* In this method, the patient is placed face down on the table with the hip flexed freely and dropping over the side. Considerable traction can be gradually applied to the lower extremity with the knee flexed to achieve reduction.

(2) *The Method of Allis (Hippocrates).* In this, the patient is placed supine on a low mattress or on a stretcher on the floor. An anesthetic will have been given and the patient fairly stable before this is done. An assistant on each side fixes the pelvis to the stretcher while the surgeon exerts rocking traction to the flexed thigh and knee, gradually pulling the head over the posterior acetabulum. The hip and knee are then extended and the cast is applied. In Dr. Adam's "Sydenham Translations of Hippocrates," on page 643, the following is the statement of Hippocrates on this subject: "In some, the reduction is effected by bending the limb at the joint with gentle shak-



Figure 1. Case I.

After three weeks of 40 lbs. skeletal traction in extension and several closed manipulations. No change could be detected in the dislocation of the right hip joint.



Figure 1. Case II.

Seventy-year-old colored male after 12 days of up to 50 lbs., femoral skeletal traction in extension.



Figure 2. Case I.

Gentle atraumatic open reduction and single body spica. Eighteen months later no evidence of aseptic necrosis of the femoral head is visible and general "washed out" appearance of femoral head and adjoining bone gives a cautious favorable prognosis.

ing." (Kiykos (wag-tail), a well-known bird in Greece, the Latin motacilla.)

(3) *The Method of Bigelow.* In this, the patient is in a supine position. The knee-flexed limb is first flexed to 90 degrees, rotated inward and adducted. This accentuates the deformity and relaxes the capsule. While maintaining traction, the limb is then adducted, externally rotated and extended in one continuous circumduction-like motion.

For anterior dislocations, the method of Allis is probably the simplest. With the slightly flexed thigh abducted, with considerable traction applied, an assistant



Figure 2. Case II.

After "vigorous" closed manipulation the femoral head is in two pieces.

pushes the head laterally into the acetabulum, an audible snap is heard and the limb is then adducted.

The second method of reducing anterior dislocations is the method of Bigelow, which is the reverse of his method for achieving reduction of posterior dislocated hips. The hip is flexed moderately and with gentle traction, the deformity is accentuated by



Figure 3. Case II.

After insertion of stainless steel prosthesis patient was able to "make a crop" three months later. The authors do not attach any favorable statistical significance to this one case of successful prosthesis, regarding this procedure "sub-judice."

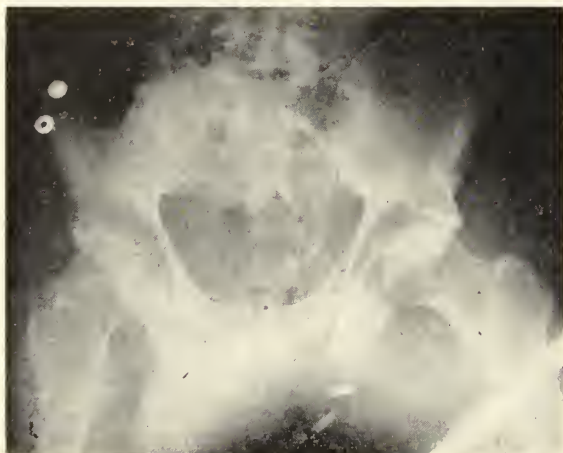


Figure 1. Case III.

After one attempt at closed manipulation and 40 lbs. of femoral skeletal traction in extension, the hip is still dislocated!



Figure 2. Case III.

A very large posterior acetabular fragment was replaced via a posterior approach.



Figure 1. Case IV.

Open reduction was necessary to replace a large posterior fragment, in a fracture dislocation of hip.



Figure 2. Case IV.

Eighteen months later myositis ossificans has resulted in "unanticipated" hip fusion.

abducting and externally rotating the limb. Then in a similar circumduction motion, the hip is internally rotated, adducted and finally extended in one continuous motion.

Central dislocations of the hip are very difficult to reduce by manipulative methods and require some form of lateral traction. Various methods of applying this have been performed in the past. The use of a Kirschner wire through the greater trochanter is fraught with some danger, especially in a swollen, distended hip. One method which appears to be most satisfactory is the utilization of the threaded pins from the Haynes extra-skeletal fixation set. With two of these large 3/16" pins in place, satisfactory lateral traction can be obtained, as evidenced in the Figure 1, Case 5.

In anterior and posterior dislocations of



Figure 1. Case V.

Traumatic arthrokatydiasis in a 16-year-old white female.



Figure 2. Case V.

Lateral traction, 20 lbs. femoral condyle traction, 15 lbs.



Figure 3. Case V.

Eighteen months later, no evidence of aseptic necrosis.

the hip, after closed manipulation or after open reduction, the patient is placed in a single body spica for from four to six weeks. Following this, gradual resumption of weight bearing is permitted. Considerable difference of opinion exists as to when to allow unrestricted weight bearing, but there is little evidence that prolonged rest decreases the incidence of traumatic arthritis and aseptic necrosis of the head of the femur.

If the above methods of closed manipulative treatments do not achieve the reduction of the hip, open reduction is mandatory. Open reduction for either anterior or posterior dislocation of the hip should not be delayed unduly. If, after a fair trial under adequate anesthesia the surgeon is unable to reduce the dislocation, open reduction should be attempted at the earliest possible moment that the patient's condition permits. As a general rule, hips that will not reduce by manipulation, or cannot be held by manipulation, will not be helped by the application of skeletal traction. Femoral traction has one valuable attribute, however. This is the stretching of the muscles about the hip joint, which does make subsequent open reduction, if performed, much easier. However, the use of skeletal traction will not "hold" an unstable hip joint or one in which a large posterior fragment of the acetabulum is "off," in any sort of stable position.

The average weight required to rupture

the adjacent muscles in four subjects, according to Bigelow, is as follows:

Pyriforms—10 lbs.
Obturator Internus—40 4/5 lbs.
Obturator Internus—36 4/5 lbs.
Gluteus Medius—17 lbs.

It is not the purpose of this paper to delve into the bad results and end results of open reduction of dislocated hips. Suffice it to say that the incidence of traumatic arthritis and aseptic necrosis increases markedly with the incidence of open reduction.

Complications of fractures of dislocations of the hip may be divided into two phases, early and late. These may be listed as follows:

Early

1. Failure of reduction.
2. Fractures of the acetabulum.
3. Fractures of the femoral head.
4. Skeletal traction treatment.
5. Sciatic nerve palsy.

Late

1. Traumatic arthritis of the hip joint.
2. Aseptic necrosis of the head of the femur.
3. Myositis ossificans.
4. Any of the above five early complications as a residual.

SUMMARY

1. An outline for the study of traumatic dislocations of the hip has been given.
2. Early closed manipulation is mandatory.
3. Skeletal traction has no place in the reduction or holding of anterior or posterior dislocations of the hip, but is useful in central dislocations of the hip.

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The most unfortunate feature of tuberculosis in elderly persons is that it usually has no distinctive symptom. The cough, sputum, dyspnoea, slight dyspepsia and a general feeling of lassitude are all put down to increasing years. It is only when sudden pain or haemoptysis occurs that the patient becomes alarmed and seeks advice. It is then that advanced, old-standing disease is found, and the damage done from the wide distribution of tubercle bacilli from this focus of infection over a number of years can be visualized.—F. R. G. Heaf, M. D., *J. Royal Inst. Pub. Health and Hygiene*, Nov., 1955.

Heart Massage Continued as Patient Is Moved
—An unusual case of successful restoration of heart function after it had stopped suddenly has

been reported by three Cleveland physicians.

Hand massage of the heart and artificial oxygen administration, begun in the hospital ward, were continued for 10 minutes while the patient was moved "through the corridors and up four floors in the elevator" to the operating room where electric shock was administered.

The resuscitation procedure has usually been carried out in the operating room when the heart has stopped during surgery. A few "exceptional" cases have been reported in which patients whose hearts stopped while they were elsewhere in the hospital were rushed to the operating room for emergency treatment.

As each new "exceptional" case is reported, the possible applications of resuscitation outside the operating room and even outside the hospital itself increase, the physicians said in the September 8 *Journal of the American Medical Association*.

The report was made by Drs. Herschel E. Mozen, Richard Katman and John W. Martin of the University Hospitals of Cleveland and Western Reserve University School of Medicine. Dr. Claude S. Beck, noted Cleveland heart specialist, assisted them.

There is little doubt that the "death factor" is small and may be reversible in many persons who fall over dead with a heart attack, they said. In many cases in which the coordinated heart beat is destroyed by electric impulses accumulating in the heart, the heart is anatomically sound and "ought to be able to continue beating."

"Under favorable circumstances, the heart could be given a second chance to beat and some of these people might be saved," they said.

Their patient was a 51-year-old woman with a history of rheumatic heart disease and other heart symptoms, who had been admitted to the hospital after she had fainted at home. The following day, while she was in the ward, her heart suddenly stopped beating and the muscle began twitching.

The chest was opened and within two and a half minutes hand massage of the heart was begun. Artificial oxygen administration—first by the "mouth-to-mouth" technique and later by a tight fitting face mask—was started immediately to prevent the cell damage that results if the brain is deprived of oxygen for longer than four minutes.

With the oxygen system reestablished, the "emergency situation was under control," the authors said, and it was decided to move the patient to the operating room for the second step—the restoration of a coordinated heart beat. Massage and oxygen administration were continued while she was moved to the operating room. One electric shock was given to the heart, and it resumed beating exactly 30 minutes after it had ceased.

The patient's recovery was uneventful except for minor complications which responded satisfactorily to treatment. She responded intelligently to questions a few hours after the attack although she had a few minor lapses of memories in the first days. She walked out of the hospital five weeks later. She had no evidence of brain damage and her heart was beating regularly, the doctors said.

"Silo-Filler's Disease" Symptoms Described—

Farmers have long known that it is dangerous to enter a newly-filled silo, but few realize the full extent of the danger, two Minneapolis physicians said recently.

A serious and potentially fatal respiratory disorder, "silo-filler's disease," can result from breathing the gas of fermenting silage, Drs. Thomas Lowry and Leonard M. Schuman said in the September 15 *Journal of the American Medical Association*.

They described the newly-identified disease as "any bronchial or pulmonary condition produced by the inhalation of oxides of nitrogen derived from fresh silage." Because it resembles other lung conditions, such as bronchopneumonia, the doctor must know the patient has been exposed to silage fumes before he can make the proper diagnosis.

The authors warned that the possibility of exposure to nitrogen dioxide fumes may increase because of the greater use of commercial chemicals containing nitrogen. These are likely to increase production of nitrogen dioxide in silage.

Prevention of the disease is simple, they said: "Allow no one to enter a silo for any purpose from the time filling begins until seven to 10 days after it is finished." Nitrogen dioxide fumes are produced during this period.

In addition, good ventilation about the base of the silo should be provided during the dangerous period so that gases will be carried away. The area should be fenced to prevent children and animals from straying into it, and a blower fan should always be run before anyone enters a silo.

Even though farmers know it is dangerous to enter a newly filled silo, their actions do not reflect their knowledge, the authors said. Each of four patients seen by the physicians said he knew he was taking a risk when he entered a newly-filled silo. The fact that they were not stopped by the knowledge strongly suggests that their ideas of this "possible" hazard were not definite enough to make them regard the danger as real, the doctors said. They hoped their report will help farmers to regard the hazard more realistically.

The disease in their four patients—two of whom died—followed a similar pattern. Immediately after exposure, cough, difficulty in breathing, a choking sensation and severe weakness occurred. These symptoms remained to some degree for about three weeks when the second phase of the illness began. The symptoms became progressively worse, while chills, fever and blueness of the skin appeared. Eventually bronchiolitis fibrosa obliterans occurred; in this condition the tiny air sacs of the lungs become closed by the ingrowth of the wall tissue.

Antibiotics and other standard treatments for respiratory diseases had no effect on the symptoms. Two of the cases were treated successfully with prednisone, a hormone related to hydrocortisone.

Two other reported cases which showed different, but related symptoms suggest that silo-filler's disease is a "continuous spectrum of conditions," they said. The manifestations are likely

to differ widely, while severity depends upon the concentration of nitrogen dioxide inhaled and the duration of exposure.

Simple safety measures in the silo will prevent the inhalation of the gas and therefore prevent the disease, the authors concluded.

108,000 Women Examined in Mass Cancer Survey—A mass cancer-detection program, involving more than 100,000 women, was reported by a group of Tennessee researchers in the September 15 *Journal of the American Medical Association*.

Purpose of the program is twofold: to determine the feasibility of the "smear" technique as a method for early detection of cancer of the reproductive organs and to accumulate information about the "natural history" of such cancer.

The Memphis and Shelby County, Tenn., project was set up with the aim of examining all women over the age of 20 in the area and then making three annual reexaminations. Since the program began three and a half years ago over half of the female population—108,000 women—have had one examination, while 33,000 have had two examinations and 8,000 three examinations.

Among the 108,000 women examined once there were 393 intraepithelial carcinomas—a type of growth which is thought to be a forerunner of invasive cancer of the cervix. Of these, 353 or 90 per cent had been unsuspected. This rate is not surprising since such carcinomas normally have no symptoms. There were also 373 invasive cancers of the womb, of which 112 (30 per cent) had been unsuspected. These figures, the authors said, show clearly the value of the smear technique as a method for early cancer detection. This simple procedure consists of taking a specimen of cells for microscopic study.

On the second examination of 33,000 women, 2.2 women per thousand were found to have intraepithelial carcinomas as compared with 3.6 per thousand on the first examination. The rate for cancer of the womb dropped from 3.4 cases per thousand women on the first screening to 0.3 cases per thousand on the second examination. A few of the cases found on the second screening had been missed earlier through error or unsatisfactory smear and the rest were new cases.

The lower rate of uterine cancer and intraepithelial carcinoma in the second screening suggests that the mass-screening approach to the control of uterine cancer can be successful since it finds cancer in the early and still curable stages, they said. However, final conclusions cannot yet be drawn.

The project is a joint effort of the University of Tennessee and the National Cancer Institute. The Memphis and Shelby County Medical Society, the Memphis and Shelby County Health Department and the local units of the American Cancer Society are cooperating in the project.

About half of the smears have been obtained from women visiting their own physicians and the rest from those attending special clinics. The results of the examination are reported to the women's personal physicians who perform further tests or give treatment if needed.

THE JOURNAL

of the

Medical Association of the State of Alabama

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

Office of Publication

17 Molton Building Montgomery, Ala.

Subscription Price \$3.00 Per Year

October 1956

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OPPORTUNITIES IN PUBLIC HEALTH

PUBLIC HEALTH PHYSICIANS NEEDED

During recent years, and continuing to the present time, a critical shortage of public health physicians has existed and still exists in Alabama. Good public health leadership is essential if we are to maintain an effective public health organization and provide adequate health protection for the people of Alabama.

This shortage of physicians is particularly acute in county health departments and a continuing need for new personnel will exist as the older health officers retire from service. Thirteen of Alabama's 34 county health officers employed full time are past the 70 year retirement age. There is a need for additional full-time medical personnel to replace 10 practicing physicians who, as an emergency measure, are serving their counties part time as acting health officers.

In order to provide maximum medical supervision of county health departments with the limited number of available full-time health officers, it is now the policy to combine counties into two, three and four county units under the supervision of a single health officer. There are in present operation 5 two-county units, 8 three-county and 1 four-county unit. The three and four-county units are composed mainly of rural counties with small populations.

Health officers are employed under three classifications, according to standards set by the State Merit System. In classifying health officers, due weight is given to the number of years of active practice and/or public health experience. The classifications and present salary ranges are:

Health Officer I—\$500-\$700 a month,
Health Officer II—\$600-\$800 a month,
Health Officer III—\$700-\$900 a month.

Reimbursement for travel performed in line of duty is currently at the rate of 8c per mile. Added benefits are eligibility for membership in the State Retirement System and Social Security coverage. Health officers, as with other employees, observe 13 holidays and earn 12 days of annual leave and 12 days of sick leave with pay each year. Annual leave can accrue up to 30 days, while sick leave can accumulate up to 90 days. A 40-hour work week is in effect with working hours usually being from 8:00 A. M. to 5:00 P. M., with one hour for lunch Monday through Friday. Scholarships are avail-

able through federal grants to provide specialized training in approved schools of public health, leading to the acquirement of a public health degree.

Applicants should be under 60 years of age, in good health, licensed or eligible for licensure to practice in Alabama and a member or eligible for membership in a county medical society.

Interested physicians may wish to contact the State Health Officer for additional information.

VOLUNTARY HEALTH INSURANCE ADVANCES

Benefit payments under voluntary health insurance programs, designed to help people pay hospital and doctor bills, are running 20% higher so far this year than in 1955, the Health Insurance Council announced recently in releasing the findings of its annual survey of the extent of voluntary health coverage in the United States. In 1955 such payments amounted to 2.5 billion dollars.

The increase in benefit payments, the Council said, reflects both the progress made by the American people in bringing their health insurance protection to more nearly adequate levels, and the continued spread of ownership.

As of July 31, the Council estimates, some 110 million persons, an all-time high, were covered by hospital insurance, while 94 million had surgical protection, 58 million had policies that cover regular medical expenses and seven million were insured against major medical expenses.

The survey, which is made annually by the Health Insurance Council, is based upon reports of health insurance programs conducted by insurance companies, Blue Cross-Blue Shield and other health care plans.

Commenting on the advances of voluntary health insurance for the year, the report stated, "The rapid growth of hospital, surgical and regular medical expense insurance during 1955 was a continuance of truly spectacular trends that have been in progress for more than a decade." During the year, the report went on to say, the number of people with hospital insurance increased by 6.1%, surgical insurance was up 7.0% and regular medical expense protection made a 17.5% gain. Major medical expense insurance made the greatest advance with an increase of 138%.

Some highlights of the Council survey at year's end are:

In addition to the 2.5 billion dollars paid in hospital, surgical and other medical benefits in 1955, the insurance companies paid 595 million dollars in benefits to people under policies designed to help replace income lost because of sickness or accident. This would bring the total benefit payments for the year to 3.1 billion dollars.

Provision for hospital care still occupied the number one place in the American health insurance program, with 59,645,000 persons holding policies from insurance companies; 50,726,000 enrolled by Blue Cross-Blue Shield; and 4,530,000 covered by miscellaneous plans. Making allowance for people protected by more than one type of insuring organization, the Council reported that 107.6 million persons are covered by hospital insurance.

Protection under surgical programs to help meet the expense of operations was provided by insurance companies to 56,645,000 persons; 39,165,000 by Blue Cross-Blue Shield; and 4,340,000 by the other health care plans. Allowing for those with duplicate health insurance coverage, the survey finds 91.9 million persons protected against surgical costs.

Regular medical expense insurance, providing doctor visits for non-surgical care, accounted for 29,451,000 persons through Blue Cross-Blue Shield, while 25,031,000 were covered by insurance company programs, with 4,639,000 persons insured under the miscellaneous plans. The unduplicated total number of persons having regular medical expense protection is 55.5 million.

Growing public awareness of the cost of catastrophic illness, the survey further disclosed, was reflected in the sharp rise in the number of persons with major medical expense insurance. Coverage under all forms of major medical programs more than doubled during 1955. Of the 5,241,000 persons covered, 4,759,000 had protection through their place of employment with the remaining 482,000 insured through individual and family major medical expense policies.

Completing its report on coverages, the Council stated that disability loss of income insurance covered 33,476,000 persons, including three million people who hold two or more such insurance policies. Of this

number, 19,238,000 were covered under group plans and 14,238,000 persons held individual policies. The number of people who work where there is a formal sick leave payment arrangement would bring the total figure to 39,444,000 persons who are protected against loss of income.

The report, as presented by the Health Insurance Council, which is a federation of leading insurance associations, is the tenth annual review of the extent of voluntary health insurance coverage in the United States.

GULF COAST CLINICAL SOCIETY MOBILE, OCTOBER 18 AND 19

Many Alabama physicians are planning to attend the October 18 and 19 meeting of the Gulf Coast Clinical Society at the Admiral Semmes Hotel in Mobile, and will take their wives with them in order that they may enjoy the boat ride that has been scheduled for them on the State Docks yacht Alice.

The scientific program will bring together many notables in the field of medicine, including Dr. J. Ross Veal, well known to so many of the state's physicians. Mr.

A. V. Wiebel, President of TCI, will be guest speaker at the banquet to be held at the Mobile Country Club on the evening of the 18th.

Coming as it does about midway between annual sessions of the State Medical Association, this meeting of the Society will be an enjoyable break for all who attend it.

SOUTHEASTERN STATES CANCER SEMINAR JACKSONVILLE, NOVEMBER 7 AND 8

Sponsored by the Duval County Medical Society, under the auspices of the Florida Division of the American Cancer Society, Florida State Board of Health, and the Graduate School of Medicine of the University of Florida, the Southeastern States Cancer Seminar will be held at George Washington Hotel in Jacksonville on November 7 and 8. A program covering a wide range of subjects pertaining to malignancy, recent advances in diagnosis and treatment, and an outstanding faculty of national authorities has been arranged and will be of great value to physicians in many branches of medicine.

There will be no registration fee.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

WELL SAID BUT STILL UNHEEDED

W. A. Dozier, Jr.

Executive Secretary

These are troublesome times; and in the heat of emotional problems, one too often fails to look at the overall picture. Also, we are prone to allow our own personal problems to overshadow what is happening to us nationally. Occasionally one sees a small article in a newspaper or a magazine which indicates that for the length of time necessary to listen to a speech a group directed its thinking to the relationship of the individual and the government. The sad thing is that too little time has been spent in thinking and therefore practically no time has been devoted to action by the vast majority of us.

The lead article in the Southern States Industrial Council Bulletin of July 15, 1956 was entitled "The Faith of Our Fathers"

and was published over the name of the Council's President, Mr. Martin J. Condon, III. In reproducing this article, the request is made that you take time to apply it to your own thinking; such can be beneficial. The article follows:

"The current effort of the states to salvage a portion of the powers reserved to them under the national Constitution and to prevent further federal whittling away of such powers is a reaction too long delayed. However, it is not too late to avert the open and notorious effort to gradually centralize all governmental powers in a federal bureaucracy, and to restore the state and local governments to the status given them by the Constitution, provided we will stop compromising our national and individual consciences.

"The effort by the Federal Government to control the states and their people has manifested itself in many ways, none of which is

more insidious than the planned control of our national wealth. The proponents of centralism know that such control is the first requisite of socialism and, playing upon our natural desire to obtain "something for nothing," they have lured us into accepting federal controls with gifts of our own money. Such cupidity merits little sympathy.

"Under our Constitution the national Government is divided into three major branches: legislative, executive and judicial—and not one of these has been free of fault in this effort to usurp functions and powers reserved to the states or to the people. This is particularly true of recent judicial trespasses into areas specifically committed to the states.

"It was the purpose of the founders of this Nation to establish a permanent government, to insure which they provided for a federal establishment of specified and limited powers. This concept was contrary to every known form of rule and was so contrary to then existing governments that from the very beginning some people still insisted the Federal Government should be master of the people. However, it is only in the past fifty years that the effort has met with success—or, it might be more correct to say, that only in the past fifty years have the people of this country shown a

willingness to surrender their liberties for the vicious paternalism of a centralized collective state.

"It would be difficult to estimate the influence politics has played in this intrusion—particularly in the field of legislation. It was said by a man, who knew whereof he spoke, that 'Politics is the science of how who gets what, when and why.' This spirit has permeated both the government and the people. We have lost sight of the fact that when the government, either by legislation, executive order or judicial fiat, extends its authority beyond the clear intent of the Constitution, it contributes to its own self destruction as surely as if it premeditatedly plans its own plunder.

"This effort by the states to stop the trend toward collectivism, through the interposition of their sovereignty between federal usurpation and their people, perhaps foretells the dawn of a new day; a day that will see individual liberty freed from the tyranny of a centralized government whose motives, however well intentioned, always end in slavery for the people.

"But, and I revert to our eagerness to secure federal handouts, this effort of the states will fail unless we subvert our own selfish personal interests to the welfare of the Nation as a whole."

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

THE CHALLENGE OF THE PREMATURE INFANT

Contributed by

Nadine Pitts, Director

Division of Public Health Education

The hospital nursery is a favorite spot for visitors. Family friends, acquaintances and strangers alike gather to look at the babies in their small beds. And comparisons of one newborn baby with another fly back and forth among the onlookers.

These babies in view are off to a good start physically, barring unforeseen difficulties. However, one baby, or more,

might have been born in the hospital that very day which was not so lucky. He or she was "born too soon." He was a premature baby, and, at best, he faces days, weeks or even months and years of special problems because of his condition at birth. Or at worst, death, as premature, as untimely as his birth, may be the outcome.

Each newborn baby continues to engage, to demand the doctor's skill. But the premature infant is a special challenge, not only for physicians but for health departments as well. Health departments enter the picture because so many premature babies die at, or soon after, birth.

In Alabama, prematurity is one of the major health problems. For three consecutive recent years, 1953, 1954 and 1955, im-

maturity at birth was the sixth leading single cause of death in the state.

Certainly, however, we are making progress in handling this problem. In 1953 the State Health Department's Bureau of Vital Statistics recorded 682 deaths from this cause. But during the very next year 95 fewer premature babies died. And again the next year there was another substantial savings in premature babies' lives.

But the fact that there were 518 deaths of premature babies during 1955 shows that much of the problem yet remains and awaits solution. All deaths from immaturity at birth are not preventable. So Alabama health officials are interested in doing what they can about the ones that are in a sense preventable.

The State Department of Health as well as the many county health departments have long-standing programs to safeguard maternal and child health generally, and that of premature babies particularly. Before examining these programs, however, a discussion of prematurity itself perhaps is in order.

Prematurity occurs when any of a number of things go wrong in the beginning of the life process. The adult human develops from a small cell. The first part of this process is carried out under ideal conditions: the living human organism develops within the body of the mother. Here it is protected against jarring and shock, it receives specially processed food, and other necessary functions, such as the removal of wastes, are performed for a period of about 280 days. It is only at the end of this time that the organism is ready to enter the world and begin its separate existence.

The period the baby spends in its mother's womb is taken up with three equally time-consuming processes. The organs of the body—the lungs, heart, liver and others—are developed during the first period. In the second, the tissues within these organs materialize. And in the third part of development, the organs and tissues grow and build further. It is this last period that vastly improves the infant's chances to survive in its separate existence.

Of course, it has been found that it is possible for a baby to be born prematurely, after the first two growth periods are completed, and to survive. But as we have pointed out, the advantages he lacks be-

cause of too short a time spent growing in his mother's body must be compensated for well, and early.

The American Academy of Pediatrics has defined a premature baby as one weighing less than five and one-half pounds at birth. In all, there are four weight classes for prematures. And the death rate for this group of infants increases as the weight lowers. In other words, more deaths usually occur among those babies weighing 2.2 pounds than among those weighing 4.4 pounds.

The premature baby's fight for life involves many handicaps. Many of them are unable to breathe properly. The muscles he needs for breathing, and his lungs, as well as his ribs, were not developed completely before birth. Moreover, his cough and "gag" reflexes are weak, and during feeding periods he may take fluids into his lungs.

The premature baby's blood circulation is poor, also. Neither his heart nor his small blood vessels are fully developed, and the latter break easily. Neither can the baby that is "born too soon" control his body temperature easily. His small size means that he has a greater area of skin in proportion to his smallness than does the six or eight-pound infant. Thus, he loses heat faster. Nor does the premature infant have a great deal of fat under his skin to act as insulation. Moreover, he cannot kick his arms and legs vigorously to produce heat and make up for the heat he loses, because his muscles are poorly developed. He even has difficulty with sweating.

As if these were not enough troubles, the premature baby has many more. His body metabolism, or the use of food, is ineffective even if he is able to take in enough for body uses. As he is very weak, he may not be able to suck or swallow properly. Thus, he may have to be fed with a tube or dropper. Moreover, his stomach is small, and he must be fed more often than other infants. Neither can the premature be handled too many times, so it is obvious that his feeding alone requires great skill.

Finally, the premature baby usually has a type of anemia at or following birth. Both in the normal child and the adult, some of the cells of the blood are constantly being destroyed and replaced with new ones. But the immature infant does not have the same ability to manufacture new cells to replace

the lost ones, so the anemia this produces may become quite severe.

Thus, both the premature infant and those caring for him must battle many obstacles to preserve life. But as many doctors have pointed out, the fact that some of these babies do survive shows their great determination to live. Perhaps their determination alone is reason enough to give them the help, the "half chance" they need.

Why are babies born prematurely, before they are ready to begin their separate lives? There are several causes. High on the list is the birth of more than one baby at a time. Thus, twins, triplets, quadruplets and quintuplets are usually all small and premature.

Still another cause is the complication of pregnancy known as toxemia or eclampsia. When this condition occurs, the lives of both mother and the baby are endangered. It produces high blood pressure, swelling of the face, hands and feet and other symptoms, and the cause is not always known. Also, serious illnesses, such as syphilis, tuberculosis and diabetes, in the mother may mean that the baby is born too soon.

Not much if anything can be done about some of the complications of pregnancy which produce premature births. However, some of them do lend themselves to prevention: the illnesses of the mother are examples which can perhaps be cured or arrested before or during the baby's early development.

Similarly, many premature babies die for no other obvious reason than that they were immature at birth, and the handicaps could not be overcome. By the same token, some of them die because of conditions arising out of inadequate care after birth. And many of these conditions can be prevented if the proper precautions are taken.

The conditions causing death among prematures which are generally considered preventable are those infections which attack the already weak, small bodies. Common among these infections are pneumonia, blood poisoning, common colds, diarrhea or meningitis.

Early medical treatment for the expectant mother is perhaps the best general preventive for premature births. In this way many of the problems that may lead to premature birth may be discovered and dealt with early, soon after they have developed. This

is the time when such difficulties and conditions lend themselves best to reversal. The same is true for such serious conditions as toxemia or eclampsia. Although doctors still do not know the answers to all the "whys" of such conditions, they have made great strides in treating them.

Alabama's health campaigns against syphilis and tuberculosis have meant better health for all the citizens of the state. And maternal and child health have been improved in the process, inasmuch as these illnesses are known to be causes of premature births.

More directly, the maternity clinics jointly sponsored by the State Health Department and county health units and local medical societies have undoubtedly helped in the saving of premature babies' lives. Many doctors refer some of their patients, the ones who are eligible for this service, to these clinics which are held regularly in many counties. The physical examination, care and understanding of her needs the expectant mother receives often makes the difference between a baby born too soon and one carried for the full time.

During one recent year, 1954, a total of 3,191 such maternity clinics was held in 50 counties in the state. Admitted to care in these clinics were 54,238 patients, and 149 private physicians gave their time to conduct the examinations and treatment.

In still another move to insure the preservation of premature infants' lives, the State Health Department has placed incubators in almost every county in the state for the use of those who need them. Other agencies, also, have provided some of these complicated pieces of machinery which make for careful, sheltered care of the premature.

The incubator is invaluable in maintaining the small baby's body temperature. The heat and moisture are carefully controlled. Additional oxygen may be provided, also. However, doctors have found that premature infants do not need as much oxygen as was originally thought. In fact, certain studies have indicated that an excess amount of oxygen may actually be a contributing cause to one of the complications associated with prematurity. This is an eye ailment known as retrolental fibroplasia.

Alabama's public health nurses, also, are constantly helping out to lessen the premature baby death toll. First of all, they are

on hand at the maternity clinics, aiding doctors in the examination and care of patients. Moreover, they are always teaching, in the clinic, in the home.

Although the most important time in the premature infant's life is the first 24 hours, he sometimes needs special care later at home. The public health nurse helps here by demonstrating the baby's needs.

In still another area the public health nurse is active in education regarding the premature infant. She works with midwives, who deliver some babies where a doctor is not or cannot be in attendance. The State Health Department's Bureau of Maternal and Child Health recently prepared a midwives' manual to help out in this vital educational job.

Although the premature baby gets off to what might be called a slow start in life, studies indicate that he soon catches up with the full-term baby. Alabama's doctors, health agencies and others will continue to work to end the useless, preventable loss of life among babies that are born too soon, and to give them the chance they need to "catch up."

The least tangible but probably the most potent factor in the existing favorable trend in mortality from tuberculosis is the general improvement in the standard of living. Greater earning power has made possible more adequate nutrition and better housing. Reduction in the average size of families has reduced overcrowding, which in turn has lessened opportunities for the spread of infection. Where economic levels have continued high, tuberculosis rates have fallen; when war or famine has intervened they promptly rise. It is more than coincidence that the levels of tuberculosis throughout the world are closely related to the economic level of the populations concerned.—*Alton S. Pope, M. D., and John E. Gordon, M. D., Am. J. Med. Sciences, Sept. 1955.*

A good college health program consists of far more than caring for the immediate needs of sick and injured students and teaching them good health habits. It has the responsibility of preventing illness or injury when possible, keeping aware of sanitary and environmental conditions that may be harmful and making appropriate recommendations, serving as an educational center for dissemination of information that may favorably affect the health of the community, and referring patients to specialized services when needed.—*Dana L. Farnsworth, M. D., Bulletin NTA, May 1956.*

Current information indicates that there are somewhat less than 400,000 active tuberculosis cases in the United States at any one time, ap-

proximately one-third of which are hospitalized for tuberculosis, one-third are known cases at home, and one-third are undetected cases.—*Robert J. Anderson, M. D., Pub. Health Reports, Feb., 1956.*

Mental Tests Suggested For Aging Employees

—A series of mental tests has been suggested as a way of deciding whether an aging person should retire, remain in his job or turn to a less taxing occupation.

Tests which could give an indication of mental adaptability, judgment and reasoning ability were suggested in an editorial in the September 15 Journal of the American Medical Association. It accompanied an announcement of objectives by the new A. M. A. committee on aging.

The tests could be of "enormous benefit" to business and to aging persons by keeping the alert older employee on the job. Many aging persons now are forced to retire prematurely solely on the basis of their chronological age. In other cases, the tests could show an individual that it is time to turn to a less taxing job, which could prolong his life.

This, however, is only one of the important problems connected with aging. With the progressive increase in the number of persons living beyond 60 years, more and more attention is being focused on the diseases which attack the aged person, and on ways of keeping him active and relatively healthy, the editorial said.

The problems of aging extend from questions of "changes in enzyme systems within individual cells" to important social and economic problems of aged persons and their relation to other members of society, the committee statement said.

In recognition of these problems, the A. M. A.'s council on medical service has established a committee on aging, formerly called the committee on geriatrics.

The committee announced today that at its first meeting it set forth several objectives, including the exploration of the medical, biological, psychological and social aspects of aging. It plans to collect information concerning energy maintenance, fatigue control, and the preservation of motivation, and to promote research in these areas.

In addition to informing the medical profession of the availability of information about the aging process, the committee hopes to stimulate medical society interest in the problems of aging and to impress upon the practicing physician the important role he can play by assuming community leadership to enrich the lives of older citizens.

The members of the committee on aging are Drs. Henry B. Mulholland, Charlottesville, Va., chairman; Edward L. Bortz, Philadelphia; Henry A. Holle, Austin, Texas; Wingate M. Johnson, Winston-Salem, N. C.; Theodore G. Klumpp, New York; Cecil Wittson, Omaha, and Frederick C. Swartz, Lansing, Mich.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

SPECIMENS EXAMINED

June 1956

Examinations for diphtheria bacilli and Vincent's.....	112
Agglutination tests.....	742
Typhoid cultures (blood, feces and urine).....	603
Brucella cultures.....	11
Examinations for malaria.....	120
Examinations for intestinal parasites.....	2,862
Darkfield examinations.....	4
Serologic tests for syphilis (blood and spinal fluid).....	25,451
Examinations for gonococci.....	1,567
Examinations for tubercle bacilli.....	3,521
Examinations for Negri bodies.....	128
Water examinations.....	2,419
Milk and dairy products examinations.....	5,267
Miscellaneous examinations.....	476
Total	43,283

CURRENT MORBIDITY STATISTICS

1956

	May	June	E. E.* June
Typhoid and paratyphoid.....	1	6	6
Undulant fever.....	2	1	2
Meningitis.....	12	9	8
Scarlet fever.....	339	403	22
Whooping cough.....	224	218	162
Diphtheria.....	1	5	7
Tetanus.....	2	0	3
Tuberculosis.....	173	307	217
Tularemia.....	0	0	0
Amebic dysentery.....	1	4	2
Malaria.....	0	0	4
Influenza.....	328	96	67
Smallpox.....	0	0	0
Measles.....	2019	1514	428
Poliomyelitis.....	3	5	24
Encephalitis.....	4	4	0
Chickenpox.....	171	83	75
Typhus fever.....	0	1	3
Mumps.....	743	332	132
Cancer.....	302	382	342
Pellagra.....	0	0	3
Pneumonia.....	130	162	130
Syphilis.....	127	186	444
Chancroid.....	6	5	12
Gonorrhea.....	374	418	389
Rabies—Human cases.....	0	0	0
Positive animal heads.....	32	31	0

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✻ ✻ ✻

July 1956

Examinations for diphtheria bacilli and Vincent's.....	110
Agglutination tests.....	761
Typhoid cultures (blood, feces and urine).....	666
Brucella cultures.....	4
Examinations for malaria.....	129
Examinations for intestinal parasites.....	3,037
Darkfield examinations.....	3
Serologic tests for syphilis (blood and spinal fluid).....	23,475
Examinations for gonococci.....	1,426
Examinations for tubercle bacilli.....	3,403
Examinations for Negri bodies.....	123
Water examinations.....	2,440
Milk and dairy products examinations.....	4,985
Miscellaneous examinations.....	353
Total	40,915

	June	July	E. E.* July
Typhoid and paratyphoid.....	6	4	7
Undulant fever.....	1	1	2
Meningitis.....	9	6	9
Scarlet fever.....	403	236	17
Whooping cough.....	218	48	75
Diphtheria.....	5	4	9
Tetanus.....	0	1	4
Tuberculosis.....	307	193	223
Tularemia.....	0	2	0
Amebic dysentery.....	4	1	1
Malaria.....	0	1	7
Influenza.....	96	43	25
Smallpox.....	0	0	0
Measles.....	1514	382	141
Poliomyelitis.....	5	11	62
Encephalitis.....	4	2	0
Chickenpox.....	83	16	17
Typhus fever.....	1	0	9
Mumps.....	332	158	76
Cancer.....	382	405	367
Pellagra.....	0	0	2
Pneumonia.....	162	154	96
Syphilis.....	186	93	276
Chancroid.....	5	1	10
Gonorrhea.....	418	367	485
Rabies—Human cases.....	0	0	0
Positive animal heads.....	31	28	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATIS-
TICS FOR APRIL 1956, AND COM-
PARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During April 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births	6388	3851	2537	24.0	21.6	22.8
Deaths	2209	1378	831	8.3	7.7	7.4
Fetal deaths	143	53	90	21.9	23.1	24.7
Infant deaths—						
under one month	127	67	60	19.9	21.9	24.5
under one year	197	91	106	30.8	31.0	33.9
Causes of Death						
Tuberculosis, 001-019	32	15	17	12.0	12.8	16.1
Syphilis, 020-029					3.8	4.2
Dysentery, 045-048					0.8	1.2
Diphtheria, 055					0.4	
Whooping cough, 056	1		1	0.4	1.1	
Meningococcal						
infections, 057	1	1		0.4	0.4	1.5
Poliomyelitis, 080, 081	1	1		0.4		0.4
Measles, 085						0.8
Malignant neoplasms,						
140-205	299	212	87	112.3	104.0	85.2
Diabetes mellitus, 260	28	17	11	10.5	7.9	11.9
Pellagra, 281	2	1	1	0.7	0.4	0.8
Vascular lesions of						
central nervous sys-						
tem, 330-334	286	176	110	107.4	102.5	102.8
Rheumatic fever, 400-						
402	3	2	1	1.1	1.5	1.5
Diseases of the heart,						
410-443	701	481	220	263.2	251.2	237.1
Hypertension with						
heart disease, 440-						
443	146	68	78	54.8	54.1	51.3
Diseases of the						
arteries, 450-456	42	23	19	15.8	18.4	12.1
Influenza, 480-483	17	11	6	6.4	6.4	6.1
Pneumonia, all forms,						
490-493	72	32	40	27.0	19.9	19.7
Bronchitis, 500-502	11	6	5	4.1	0.4	0.8
Appendicitis, 550-553	5	1	4	1.9	0.8	2.3
Intestinal obstruction						
and hernia, 560, 561,						
570	6	3	3	2.2	3.8	3.8
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	8		8	3.0	0.8	2.7
Cirrhosis of liver, 581	13	9	4	4.9	3.4	4.9
Diseases of pregnancy						
and childbirth, 640-						
689	6	3	3	9.2	6.8	9.8
Congenital malforma-						
tions, 750-759	24	18	6	3.8	4.9	4.0
Accidents, total, 800-						
962	172	110	62	64.6	51.4	55.4
Motor vehicle acci-						
dents, 810-835, 960	84	60	24	31.5	20.7	21.3
All other defined						
causes	387	216	171	145.3	133.7	120.4
Ill-defined and un-						
known causes, 780-						
793, 795	92	40	52	34.5	28.9	41.8

PROVISIONAL BIRTH AND DEATH STATIS-
TICS FOR MAY 1956, AND COM-
PARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During May 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births	6013	3758	2255	21.7	21.0	21.8
Deaths	2293	1430	863	8.3	8.0	7.9
Fetal deaths	128	50	78	20.8	28.5	27.5
Infant deaths—						
under one month	137	81	56	22.8	22.8	28.4
under one year	200	98	102	33.3	33.0	38.2
Causes of Death						
Tuberculosis, 001-019	37	11	26	13.3	14.9	13.2
Syphilis, 020-029	7	1	6	2.5	3.6	2.2
Dysentery, 045-048	2		2	0.7		
Diphtheria, 055						0.4
Whooping cough, 056	1		1	0.4	1.1	0.7
Meningococcal						
infections, 057	1	1		0.4	1.8	0.7
Poliomyelitis, 080, 081					1.4	1.1
Measles, 085	4	3	1	1.4	0.4	1.5
Malignant neoplasms,						
140-205	313	231	82	112.9	105.0	102.1
Diabetes mellitus, 260	23	19	4	8.3	8.4	7.0
Pellagra, 281					0.4	0.4
Vascular lesions of						
central nervous sys-						
tem, 330-334	278	176	102	100.2	105.0	106.6
Rheumatic fever, 400-						
402	3		3	1.1	2.2	1.5
Diseases of the heart,						
410-443	816	544	272	294.2	264.5	253.1
Hypertension with						
heart disease, 440-						
443	186	87	99	67.1	59.6	57.3
Diseases of the						
arteries, 450-456	48	33	15	17.3	15.6	9.6
Influenza, 480-483	13	7	6	4.7	3.3	5.1
Pneumonia, all forms,						
490-493	80	45	35	28.8	21.4	19.1
Bronchitis, 500-502	2	1	1	0.7	0.7	1.1
Appendicitis, 550-553	5	1	4	1.8	0.4	1.1
Intestinal obstruction						
and hernia, 560, 561,						
570	6	6		2.2	4.0	4.0
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	3		3	1.1	2.2	3.3
Cirrhosis of liver, 581	11	10	1	4.0	2.2	4.4
Diseases of pregnancy						
and childbirth, 640-						
689	5	2	3	8.1	21.8	14.7
Congenital malforma-						
tions, 750-759	30	19	11	5.0	4.0	7.1
Accidents, total, 800-						
962	156	97	59	56.2	58.1	53.6
Motor vehicle acci-						
dents, 810-835, 960	70	50	20	25.2	26.2	27.9
All other defined						
causes	355	199	156	128.0	141.0	154.3
Ill-defined and un-						
known causes, 780-						
793, 795	94	24	70	33.9	29.4	23.5

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

November 1956

No. 5

PRIMARY CARCINOMA OF THE LUNG

A Report of 382 Cases of Carcinoma of the Lung

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and

CHARLES J. DONALD, JR., M. D.

Birmingham, Alabama

In recent years there has been a considerable increase in the incidence of primary carcinoma of the lung. This has progressed until in many hospitals its occurrence now exceeds that of carcinoma of the stomach.

The clinical picture of carcinoma of the lung is quite varied. It ranges from that of no symptoms to multiple complaints. We feel that any symptoms due to carcinoma of the lung denote a late lesion as there are no early symptoms.

The symptoms are usually related to the location of the tumor rather than the tumor itself. For instance, a tumor located in one of the major bronchi will give symptoms much earlier than one located in the periphery of the lung.

The symptoms may include cough, a change of cough, hemoptysis, chest pain, loss of weight, dyspnea, unilateral wheezing, weakness, indigestion, or a history of recent respiratory infection.

Cough is the most common symptom. Frequently, patients have paid little or no attention to it because of a previous chronic cigarette cough. Hemoptysis is next in frequency. This is usually described as streaking. Massive hemorrhage rarely occurs with carcinoma. The dyspnea noted is usually out of proportion to the amount of atelectasis present. Frequently patients deny any dyspnea although they are obviously having difficulty.

Pneumonia is often the first symptom of carcinoma of the lung. This is due to the blockage of a bronchus with secondary infection distal to the tumor. An associated lung abscess may also develop. We feel that any patient past 40 years of age with pneumonia or a lung abscess should be very strongly suspected of having a bronchogenic carcinoma. Bronchoscopy and possible exploratory thoracotomy should be done unless complete and prompt resolution of the entire pneumonic process takes place. All too often we have seen patients who have been treated two or three times with antibiotics for recurrent pneumonia when the underlying etiologic process was a primary bronchogenic carcinoma.

Skin metastasis has also been seen in several cases. In one patient a metastatic lesion to the forehead was the presenting and only complaint.

The presence or absence of symptoms is of very valuable prognostic importance. Overholt found that only 48 per cent of those patients with symptoms are resectable and that 89 per cent of these patients already have metastasis. However, in those patients with no symptoms, 100 per cent are resectable and only 17 per cent show metastasis.

The work up for carcinoma of the lung should include thorough roentgenographic and fluoroscopic examination of the chest. Roentgenograms are the most important diagnostic aid that we have in finding carcinoma of the lung. In fact, over 95 per cent

of all carcinoma of the lung can be seen if proper x-rays are made. We use, in addition to the usual films, a routine lateral x-ray. In lesions behind the heart, it will often show pathology that cannot be seen on other films. Planigrams and Bucky x-rays are also made in difficult cases.

Bronchoscopy should be done for information as to diagnosis and to operability. Positive diagnosis was made in only about 40 per cent of those cases bronchoscoped. A negative bronchoscopic examination in no way rules out the presence of carcinoma of the lung. Bronchial washings can be taken at the time of bronchoscopy for cytologic examination.

Thorough physical examination should be made of the patient, with particular emphasis being paid to both supraclavicular areas. Frequently, small nodes may be palpable. If a node is palpable, we feel an exploration should be made of the supraclavicular area for biopsy. See Table I for our experience with Papanicolaou, stains of bronchial washing, and supraclavicular biopsy.

TABLE I

Bronchial washing.....	129
Negative	86
Positive	36
Suggestive	7
Supraclavicular nodes.....	67
Positive	50
Negative	17

REPORT OF CASES

We would like to present our experience with primary carcinoma and adenoma of the lung since 1948. There has been a total of 382 carcinomas and 13 adenomas. The sex incidence is found in Table II.

TABLE II
CANCERS OF THE LUNG 1948-MARCH 1956

Male	333
Female	49
Total	382
Age Incidence	2-76

As can be seen in Table III, 170 of this group were inoperable when seen. In 50 of these patients there were positive supraclavicular lymph nodes demonstrated. Fifty-seven were inoperable due to bronchoscopic findings. In the remaining 63 cases, there were other signs of inoperability,

such as distant metastasis, fixation of the mediastinum, or pleural fluid positive for tumor cells.

TABLE III
OPERABILITY AND TYPE OF TREATMENT

Inoperable when seen	170	Deaths
Explored only	79	5
Resected	133	9
Pneumonectomy	104	
Lobectomy	29	
Total	382	14

Seventy-nine patients were explored only with 5 deaths. These patients had, at the time of surgery, involvement of major blood vessels, the heart, other vital structures, or the lesion itself was too extensive to be resected.

One-hundred and thirty-three patients had some type of resection. Pneumonectomy was done in 104 of these patients and lobectomy was performed in the remaining 29. We feel that lobectomy is an excellent procedure in certain selected patients with carcinoma of the lung. It is usually reserved for those patients who have peripheral lesions or are poor risks. There were nine deaths in the resected cases.

One interesting complication was a chylous thorax. This developed following a left pneumonectomy. At the second operation, we found the chyle to be coming from an accessory lymph duct 5 cm. to the left of the vertebral column. This was ligated without any further complication.

There seems to be a definite relationship between smoking and carcinoma of the lung. This is thought to be particularly related to squamous cell carcinoma. In the past three years we have kept a record of those who smoke. There were 134 patients with squamous cell carcinoma who smoked and four who did not smoke. These four were all women. Because of this, we feel that all patients who smoke and are forty years or older should have chest x-rays at six month intervals.

TABLE IV
RELATIONSHIP OF SQUAMOUS CELL CARCINOMA TO SMOKING

Year	Smokers	Non-Smokers
1953	39	0
1954	36	1
1955	40	3
1956	19	0
Total	134	4 All women

There were thirteen patients with adenomas seen in this period. Ten of these had lobectomy and three had pneumonectomy. Two of these patients had metastasis to hilar nodes. There were no deaths in this group and all are living three plus years.

TABLE V

Adenoma	Deaths
Lobectomy 10	0
Pneumonectomy 3	0
(2 with metastasis)	
All living	

DISCUSSION

Three-hundred and eighty-two carcinomas of the lung have been presented. Of these, approximately one-half underwent thoracotomy and slightly over one-third were resected.

Fifty of the 133 resections were done five or more years ago. Of the original 50 patients, there are 10 who survived five or more years. It is interesting that the type of cellular structure of the tumor seems to have little relation to prognosis. Two of this group had highly anaplastic carcinoma. In addition to this, four of these five-year survivors had metastasis to the hilar nodes at the time of their resection. Of these five-year survivors, there were two who had lobectomy and the rest had pneumonectomy.

One of the five-year survivors had involvement of the brachial plexus at the time of his original operation. A palliative lobectomy was carried out, followed by deep x-ray therapy. He is alive and without evidence of recurrence five and one-half years later. In addition to these ten five-year survivors, there was one patient with sarcoma and one with metastatic carcinoma who have lived five or more years.

In recent years there has been considerable argument as to the malignancy of bronchial adenomas. While two of this group had metastasis to hilar nodes, all are living three or more years following resection. It is our feeling that bronchial adenoma is a low grade malignant tumor.

Exploratory thoracotomy should be considered in any undiagnosed lesion of the chest. The putting off of surgery until symptoms develop will frequently make the lesion incurable. The hope for higher survival rate is in the early resection of the lesion before the diagnosis is obvious.

CONCLUSIONS

1. Symptoms and x-ray findings vary considerably in bronchogenic carcinoma.
2. Practically all carcinoma of the lung can be seen if proper x-rays of the chest are made.
3. Approximately one-third of the patients had resectable tumors.
4. From this series of cases there is suggested a relationship between smoking and squamous carcinoma of the lung.
5. In these resected cases there is approximately a 20 per cent five-year survival rate for bronchogenic carcinoma.
6. From this series there appears to be little relationship between the grade of tumor, hilar node metastasis, and five-year survival.

A. M. A. Begins Second Phase of Medical Services Survey—Americans who were discharged from hospitals during the third week of October will contribute to a massive survey designed to learn what the hospital patient gets for his money, not just what he spends.

The American Medical Association has announced the second phase of a three-part, five-year study measuring the medical services given to the American people by their physicians. The survey, which will have cost about \$100,000 when completed, is the first of its kind—measuring services and not money spent.

The results, which will be published late in 1958, may help bring about changes in hospital construction, medical education, health insurance rates, and other health care matters, an editorial in the October 6 Journal of the A. M. A. said.

Questionnaires have been mailed to some 7,000 hospitals to learn the age, sex, length of stay, and diagnoses for every hospitalized person discharged during the third week of October.

In the first phase conducted in 1953, the A. M. A. bureau of medical economic research determined the age and sex of hospital patients on a given day, and found that men were more hospitalized than women, even though one out of six beds was used for a maternity case. The final phase will be conducted next spring when physicians will contribute information about patients seen in the office and at home.

According to the editorial, the current questionnaire will help answer such questions as: Which ailments or conditions are sending most Americans to hospitals? Which are keeping them there the longest? How many beds are taken up by accident casualties, by pregnant women, by patients undergoing non-emergency surgery?

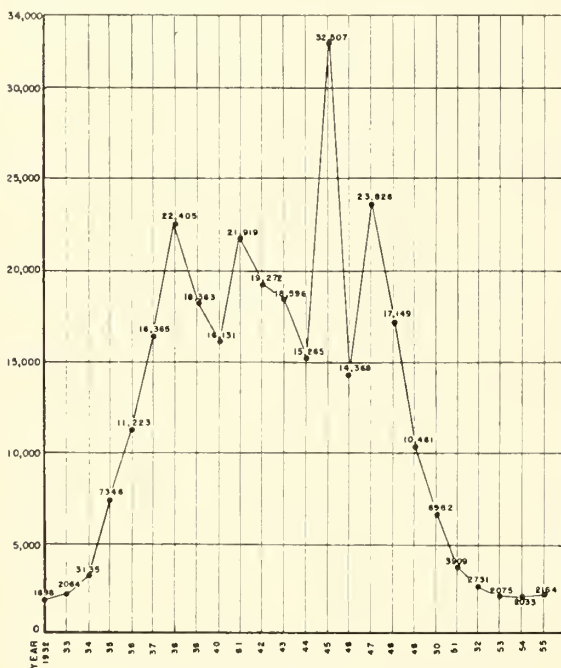
Future medical education may be influenced by information gained on the operative procedures which seem to be predominant for specific diagnoses and on the number of patients helped by diagnosis of ailments hidden or unsuspected when they were admitted to the hospital. The survey also may help in the designing and locating of new hospitals, the editorial said.

EVOLUTION OF VENEREAL DISEASE CONTROL IN
ALABAMA

WALTON H. Y. SMITH, M. D., C. P. H.

Montgomery, Alabama

In the beginning in Alabama there was much syphilis with little being done. Reporting was poor, control was scanty, and in all 67 counties in 1932 only nine had free clinics in operation with a mere 1,998 new cases being reported for the whole state. Slowly, through education, case finding, and mass attack, reporting began to improve until a peak of 32,507 was reached in 1945 (Graph I).



GRAPH I
SYPHILIS MORBIDITY FOR ALABAMA
1932 - 1955

But there were lean years with pitifully small amounts of arsenic, bismuth and mercury being distributed until 1935 when almost all the money appropriated for venereal diseases was used for drugs. Clinics were established on a shoestring basis. Patients were treated free or, if they could pay, any amount up to fifty cents was collected and this money was given to the clinician for that day. As a result, clinics flourished in numbers and size but the great momentum came in 1938 with federal

aid. Then hundreds of patients were treated weekly in each of the 92 clinics (Graph II) but the big problem of treatment lapses became more evident. Very few patients were receiving the minimum of 20 arsenic and 20 bismuth injections to control infectiousness and the average was about six injections of each drug. And this problem remained until the penicillin era.

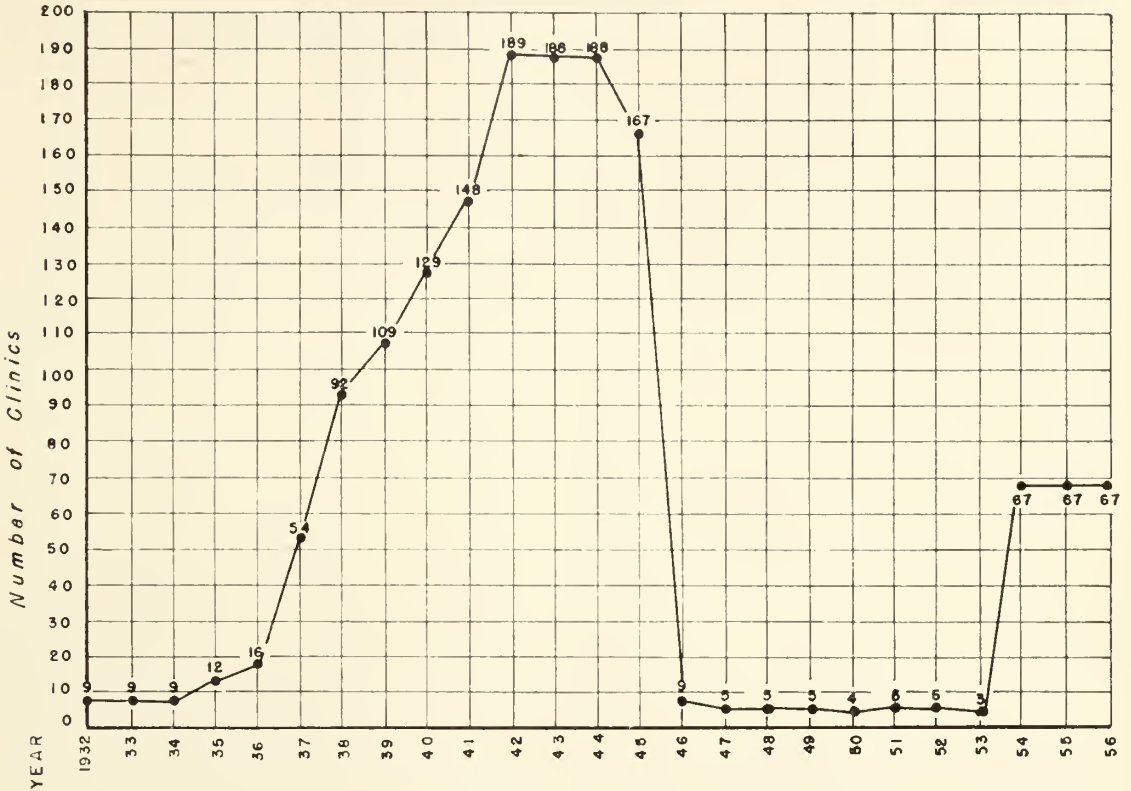
With money came a plutocratic feeling. Subsidization of county health departments made case-holding and case-finding activities possible and the employment of trained state investigators for loan to counties. Physicians were given a one month's refresher course in the U. S. Public Health Service clinic in Hot Springs, Arkansas. Then, in August 1940, a one week's refresher course in venereal diseases for physicians was begun at the Mobile City Hospital, Mobile, Alabama. Many physicians were trained in the intricacies of treatment and diagnosis at Mobile.

But the problem kept increasing and in 1940, with the registration for selective service,¹ 196,005 males, 21-35 years of age, were blood tested and 17,414 or nine per cent were found positive for syphilis. Of these 1.5 per cent were in the white race and 19.8 in the Negro. This then became the first large survey in the state that pointed up the extent of the problem.

Much of the forward movement each year of case finding was being steadily whittled back by the enormous problem of case holding. By 1942 there were 189 stationary (Graph II) and two mobile clinics in operation for the dispensing and injection of over half a million doses each of arsenic and bismuth. Yet, of the thousands of patients treated, only 13 per cent were receiving the minimum of 20 arsenic and 20 bismuth injections. To overcome this fault, the Eagle-Hogan² plan of eight weeks

1. Gill, D. G.; Smith, W. H. Y., and Damon, S. R.: Syphilis in Alabama as Revealed by a Serologic Survey of Selective Service Registrants, Ven. Dis. Inform. 24: 6-11, 1943.

2. Eagle, Harry: The Treatment of Early and Latent Syphilis, J. A. M. A. 126: 538-544 (October 28) 1944.



GRAPH 2

THE NUMBER OF VENEREAL DISEASE CLINICS IN ALABAMA 1932 - 1956

of treatment of early syphilis was begun in one clinic.

And 1943 brought the streamlining of all clinics, with the larger urban ones using the Eagle plan, the smaller urban ones the 16-weeks rapid treatment, and rural clinics the 30-weeks rapid treatment plan.

That year State Senator Bruce Henderson, who had seen the effectiveness of treatment in improving the efficiency and work capacity of his infected plantation Negroes, initiated and had passed a law requiring every person in Alabama between the ages of 14 and 50 to have his blood examined for syphilis. This mass blood testing juggernaut moved into the first county in the latter part of 1943.³ Moving jerkily at first, it gained impetus and speed in the next year and a half, and had passed through seven more counties to reach the colossal Holly-

woodish extravaganza of Jefferson County. Staged by the U. S. Public Health Service and the state, it became the first metropolitan survey.^{4, 5} The first paper on mass blood testing³ showed that 80 to 90 per cent of the population between the ages of 14 and 50 would voluntarily comply with the law. But would they in a large urban population of nearly half a million people? The pattern for setting up stations for blood letting, the tempo and most of the basic plans were already proven workable from the previous eight-county experience. But for this gigantic operation every phase had to be expanded more than ten-fold and everything had to be glamorized. In addition to the blood letting stations, a mass blood testing laboratory, built in eight days during wartime, was set up and geared to examine

3. Smith, W. H. Y.; Gill, D. G., and Damon, S. R.: A Preliminary Report of Blood Testing as Required by Alabama Law, in the First Three Counties Surveyed, *J. M. A. Alabama* 14: 86-92 (October) 1944.

4. Smith, W. H. Y., and Denison, George A.: Blood Testing and Treatment Program in Jefferson County, Alabama, *J. Ven. Dis. Inform.* 27: 94-103 (April) 1946.

5. Denison, George A., and Smith, W. H. Y.: Mass Venereal Disease Control in an Urban Area, *South M. J.* 39: 195-202 (March) 1946.

ly rapid treatment center admissions which began slowly in 1944 and rose very rapidly each year until the peak years of 1947 and 1948 when the admissions were over 1500 a month (Graph III).

From the mass survey came the swarms of patients for the rapid treatment center. When the figures were tallied from the state-covered survey,⁶ 1,450,513 people had been tested and 94,636 of these or 6.5 per cent were found infected (Table II). The

TABLE II		
MASS BLOOD TESTING FOR SYPHILIS IN ALABAMA		
1943-1953		
First Survey		
67 Counties		
Number Tested	.....	1,450,513
Infected	.....	94,636
Rate	.....	6.5%
Second Survey		
54 Counties		
Number Tested	.....	816,519
Infected	.....	17,712
Rate	.....	2.16%
THIRD SURVEY		
10 Counties		
Number Tested	.....	140,249
Infected	.....	2,945
Rate	.....	2.09%

second survey was carried to only 54 counties, because the other thirteen, except for Jefferson County, had an incidence so low no additional mass attack was needed. This time there were 816,519 individuals tested and 17,712 or 2.16 per cent were infected. The ten counties in the third survey represented the high incidence areas, except Jefferson County, and 140,249 were tested and 2,945 or 2.09 per cent were found infected. By 1953, the time of the last complete county survey, the newly reported cases for the state were so few that mass blood testing was abandoned as an effective case-finding mechanism. It was replaced by spot blood testing in local areas of rising incidence, with venereal disease investigators being used as the frontal attackers for the continuing control program.

And in 1952, because of the declining number of patients, the shortened treatment plan, and the resulting high patient cost, the rapid treatment center was abandoned in favor of prevention and control

centers. There were three of these centers in the state and the patients were boarded out for the time it took to treat them. Early syphilis was treated in three days with 2.4 million units of procaine penicillin in oil and late syphilis was treated in eight days with 4.8 million units of this preparation. These centers were closed in 1954, when a single injection of penicillin was proven adequate, and patients were referred to their local county health departments for treatment.

These changes followed hand in hand with the declining morbidity, and the plateau that has been reached for the past three years is close to that ephemeral thing called the irreducible minimum.

And now you will see this paper has been presented in the round. It began with about 2,000 cases of an inadequately reported epidemic and poor local facilities, worked up and through the problem and returned to about 2,000 cases a year, which closely represents the existing problem. This proof comes from physicians, hospitals and the reduced positive bloods found by the laboratories. The return to local treatment in health departments completes the picture in the round.

A. M. A. Session Set for Nov. 27-30 in Seattle—
The American Medical Association's 10th clinical session, scheduled for November 27-30 in Seattle, will be tailored for the general practitioner.

It is intended to provide the family doctor with information about the latest special techniques, treatments, medicines, and equipment. Approximately 2,500 physicians are expected to attend the meeting.

The A. M. A. council on scientific assembly and the general committee, headed by Dr. M. Shelby Jared of Seattle, have nearly completed plans for the scientific meeting.

The center of activities will be Seattle's Civic Auditorium, where scientific sessions will be held and more than 200 scientific and technical exhibits will be displayed. Headquarters will be the Olympic Hotel, where the A. M. A. House of Delegates, Board of Trustees and various councils and committees will meet.

The scientific program will include 20 panel discussions on such subjects as hypertension, hemolytic anemia, prenatal care, epilepsy and vascular disorders. Forty-five papers will be delivered by well-known medical educators and practicing physicians from all parts of the country on such subjects as fluid balance, fractures, diabetes and heart disease.

Closed circuit television clinics, featuring Seattle area physicians, will be presented to those attending the meeting. A medical motion picture program is also being prepared.

6. Smith, W. H. Y., and Gill, D. G.: The Effectiveness of Alabama's Mass Blood Testing Program, South M. J. 43: 185-190 (March) 1950.

A CASE OF HORSESHOE KIDNEY PRESENTING AS AN INTESTINAL OBSTRUCTION

SUMNER D. DAVIS, M. D.

and

CLARENCE L. SALTER, M. D., F. A. C. S.

Talladega, Alabama

Gutierrez's monograph on "The Horseshoe Kidney" described the varied symptoms and pathologic changes of this abnormality, and mentioned that the symptoms of intestinal colic occurred rarely. Chesterman, in the British Journal of Urology, reported a case of hydronephrosis of a horseshoe kidney presenting as an acute intestinal obstruction. Golm, in the 1928 German literature, reported a case of ileus caused by a large hydronephrosis of a portion of a horseshoe kidney. Further search of the literature has failed to reveal similar incidents. The following case is thought to be worth reporting because of its rarity.

A 64 year old colored male was first seen at his home on the night of March 22, 1955. He complained of severe upper abdominal cramping and nausea and vomiting for the past 36 hours. He was in obvious pain, promptly vomited water as he drank, and showed evidences of dehydration. He was hospitalized immediately.

Physical findings revealed normal colored sclerae, and the abdomen was moderately distended and tympanitic, though not tender. Small bilateral inguinal herniae were present, as were moderate internal and external hemorrhoids. The urine showed a 4 plus sugar.

Past history revealed vague back and epigastric pains, existing for an undetermined time, and diabetes discovered two years previously. He had retired from work as a laborer because of backache due to arthritis.

A saline enema, returning feces and gas, failed to relieve the cramping. Intravenous fluids and insulin were started that night. The next morning a flat plate of the abdomen and chest x-ray were negative except for moderate hypertrophic changes of the vertebrae. Gastric suction returned copious fluids with bile, and the patient improved symptomatically.

On the second hospital day a gastroin-

testinal series reported a patent pylorus but inability to force barium beyond the second portion of the duodenum, suggesting a



Fig. 1

stenosis possibly due to a primary malignancy of the duodenum or carcinoma of the pancreas (Fig. 1).

Other laboratory data were unrevealing excepting indications of the known diabetes, a serum amylase of 127, 75 mg. % of albumin, and 100 red blood cells per high power field in the urine.

A firm smooth mass was felt below the umbilicus about 2" wide and lying across the vertebral column. The right kidney was palpable and not tender; the liver and spleen were not felt. A presumptive diagnosis of an abdominal tumor was made. Further efforts toward improving fluid balance and diabetic treatment were considered advisable. He was maintained on intravenous fluids. Attempts to remove the gastric suction or clamp the tube produced vomiting. A mild, upper respiratory infec-

tion further delayed exploration until the tenth hospital day.

The peritoneum was opened through a right upper paramedian incision. Careful exploration of the omentum and all upper abdominal viscera failed to reveal any pathology. The mass previously noted was retroperitoneal.

The peritoneum was opened between the right colic and the ileocolic arteries to expose what was recognized as the isthmus of

enlargement of the upper pole on the right.

Interestingly, in exploration of the upper pole of the right kidney, separation from the duodenum was obtained with ease except for the few fibrous bands that required sharp dissection. On freeing these fibrous bands the upper pole dropped out and away from the duodenum, dropping down approximately one inch. Figure 2 is a composite photograph demonstrating the proximity of the right upper pole of the kidney to the second portion of the duodenum.



Fig. 2

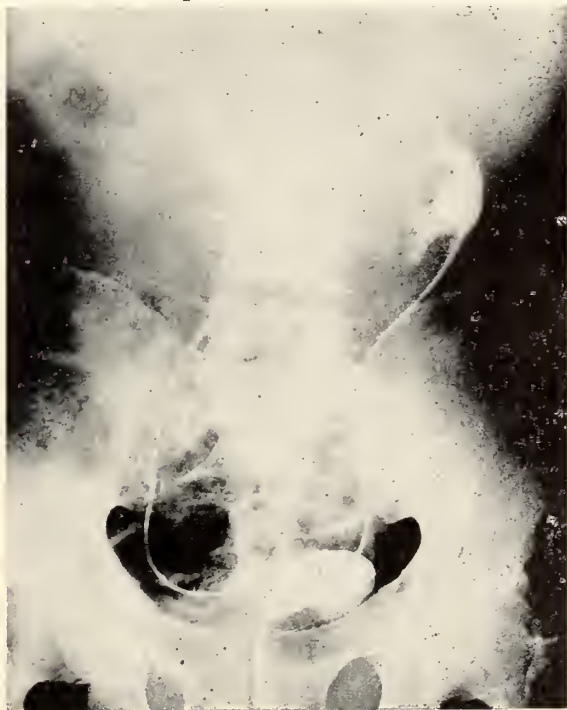


Fig. 3

a horseshoe kidney. The isthmus was fully $\frac{1}{2}$ inch thick and about two inches wide and composed of normal renal tissue. The ureters crossed the isthmus anteriorly and laterally to each side of the vertebral column. The upper pole of the right portion of the kidney was markedly enlarged but appeared normal and contained no palpable mass within. It lay pressing the flattened second portion of the duodenum against the vertebral column. The upper pole at its mesial surface was attached to the duodenum by fine areolar tissue and some heavy fibrous bands. The left portion of the kidney was about $\frac{3}{4}$ the size of the right and lay rotated with its pelvic axis in a vertical plane close against the vertebral column on the left. Several aberrant renal vessels were seen supplying each portion of the kidney. Neither part of the kidney appeared hydronephrotic despite the

Being faced with a totally unexpected condition and an unsafe approach for renal surgery, as well as still feeling that ileus or obstruction might reoccur, an anterior gastrojejunostomy was performed. Postoperative recovery was complicated by the diabetes, but by the 12th day a retrograde pyelogram was done revealing a typical picture of a horseshoe kidney as described by Gutierrez (Fig. 3). The patient was discharged on the 15th postoperative day apparently well.

Follow-up during the past year shows that a trace of albumin and some red blood cells persist in the urine. He has not complained of abdominal pain, previous constipation is improved, and he has gained 15 pounds. An upper GI series done the first of March of this year shows that barium can be forced through the duodenum. An intravenous

pyelogram and phenolsulfonphthalein test demonstrate good kidney function.

This case is presented as an additional, though extremely rare, point to consider in the differential diagnosis of intestinal obstruction. McCrae states that a history of vague abdominal pain in changing body position in the presence of a centrally located palpable abdominal mass should be looked upon with suspicion for a horseshoe kidney until proven otherwise. Proof of the presence of this abnormality may be obtained by x-ray pyelography.

CONCLUSIONS

A case with horseshoe kidney, diagnosed at operation, presenting symptoms of high intestinal obstruction is presented.

CREDITS

I would like to give credit to Dr. C. L. Salter of Talladega for the excellent surgery in this

case and his assistance and interest in its preparation, and to Dr. J. A. Meadows for x-ray studies and interest. The University Library and the Library of the College of Surgeons aided in the search of the literature. Mr. R. E. Hogan of Talladega is to be credited for the photography.

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PROBLEMS IN THE CARE OF NEWBORN INFANTS

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All of us, at one time or another, have problems in the care of newborn infants. This paper is designed to reemphasize some of these problems, and to dwell on each briefly. In an effort to be brief, only the important facts of each will be discussed.

Anoxia: One of the most important problems that confronts the pediatrician is anoxia at the time of birth. Delay in establishment of respirations in the infant generally means disturbances in the central nervous system rather than in the lungs themselves. This central impairment most often comes from previous anoxia, such as that associated with premature separation of the placenta, from trauma at the time of birth, or from narcosis associated with sedation in the mother during the period of delivery. Resuscitation is therefore aimed at the central nervous system, but with preservation of a satisfactory airway, so that once the central nervous system begins to act it will not fail again because of anoxia. No known specific measures will aid the central nervous system except getting oxygen into the blood so that it will oxygenate the brain. Washing out volatile

anesthetics from the lungs and counteracting morphine and derivatives by the use of Naline will also aid in resuscitation. Oxygen should be administered after gently suctioning out the nasopharynx. This can be accomplished by incubator or mask. If breathing is not established in this fashion, then positive pressure should be given by mask. The purpose is not to blow up the lungs, but to improve the color of the infant by oxygenating the blood and brain. In turn, respirations of the infant will improve. The infant should be kept warm, and handled as little as possible. Tilting the head downward will aid in drainage of secretions from the lungs.

Hyaline Membrane Disease: Hyaline membrane disease is a condition of the lungs in which there is found a deposit of a protein substance in the alveoli of the lungs. This condition occurs more commonly in premature infants, infants born by cesarean section after intrauterine distress, in infants born of toxemic mothers, and in infants born of diabetic mothers. Generally, it begins shortly after birth, but not after six hours post-delivery. Respirations become rapid and grunting in nature, and the infant begins retraction of the chest cage.

Soon after he becomes cyanotic. It is most severe by the second day and if the infant can survive a week, complete recovery takes place. The mortality is about twenty per cent. The lungs on x-ray reveal a granular appearance even to the periphery of the lung fields. The treatment is primarily symptomatic. Oxygen should be administered to relieve the cyanosis, but avoidance of excessive use is recommended. Chemotherapy and mists are of limited value but may be tried.

Use of Drugs in the Newborn: Infection in newborn infants and in prematures accounts for about 10 to 15 per cent of deaths of these babies. Bronchopneumonia is particularly common and may occur in the first 12 to 18 hours of life. If undetected, this may result in death of the infant. Septicemia and meningitis in the newborn period are also common and dreaded conditions. In view of the insidiousness of these diseases in the newborn, it is wise to consider the prophylactic use of drugs in babies born after prolonged rupture of membranes, prolonged labor, or obvious intrauterine infection. Also, it is wise to use these drugs in prematures in which infection might be encountered, in cases of obvious pneumonia and hyaline membrane disease, and in infants having feeding difficulties or who are listless or lethargic. The best treatment of course is prevention. Use of a combination of penicillin and dihydrostreptomycin is probably the drug of choice. Doses of 100,000 units of penicillin and $\frac{1}{4}$ gram streptomycin daily for five to six days seem to be adequate. Other broad spectrum antibiotics, the sulfa drugs and neomycin may be used when indicated.

Post-Maturity: Post-maturity used to be thought of as a nonentity. It is now known to be a reality and certainly a hazard in some instances. It occurs more often in elderly primiparas. In women over 26 years of age, one out of three who delivers after more than 300 days of gestation loses her infant. Most of the deaths occur during or before delivery, however. It is most especially seen in women who have been sterility problems. The post-mature infant is an unusually alert infant, who is quite aware of his surroundings. Usually the vernix is absent and the skin assumes a dry and cracked appearance and frequently peels easily. The infant is malnourished

due to poor placental function and there is usually meconium staining of the skin, nails and umbilical cord. There is no treatment but prevention may be accomplished by induction of labor when it is felt that the infant is at term.

Erythroblastosis: We are all familiar with the problem of erythroblastosis in infants. It is most commonly due to AB and Rh incompatibility. Jaundice in infants under 24 hours of life almost always should be considered abnormal. There are several procedures which will aid in arriving at a diagnosis: (1) If the mother is Rh negative an Rh antibody titer should be obtained in the third trimester of pregnancy. (2) A direct Coombs test should be done at the time of birth from cord blood and, if positive, a diagnosis of erythroblastosis may be entertained. (3) A blood bilirubin should be done on cord blood and repeated serum bilirubin levels should be run. Very recent determinations of the serum pigments from diseased cells by electrophotometric means may later prove of value. These determinations are still in the experimental stage, however.

When erythroblastosis is present, an exchange transfusion is usually indicated and should be done before the infant appears acutely ill, if possible. Delay often will result in death of the infant. Female type "O" Rh negative blood is the best to use for transfusion. Bilirubinemia and kernicterus are best prevented by exchange transfusion. The indications for use of the exchange transfusion are these: (1) in an infant that obviously has erythroblastosis at birth; (2) in infants whose maternal titer is 1:64 or above; (3) where there is a history of severe disease or kernicterus in a previous infant; (4) in these cases in which there is a serum bilirubin level of greater than 10 mgm. % in the first 12 hours of life; and (5) in prematures who have erythroblastosis.

Prevention of erythroblastosis at present is impossible. Steroids are not effective and may be detrimental to the infant. Generally speaking, pregnancy should not be interrupted early to avoid erythroblastotic infants, because prematurity probably poses more problems than the allowance of the pregnancy to go to term. However, there may be selected cases in which early delivery may occasionally be indicated.

THE JOURNAL
of the

Medical Association of the State of Alabama

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

<i>Office of Publication</i>	
17 Molton Building	Montgomery, Ala.
<i>Subscription Price</i>	
\$3.00 Per Year	

November 1956

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THE AMERICAN PHYSICIAN AND THE
WORLD MEDICAL ASSOCIATION

The World Medical Association has become a strong factor in protecting and promoting the professional interests of the medical profession and the cause of world peace.

Now in its 9th year, W. M. A. is a federation of the most representative national medical association in each of 52 nations. These member organizations represent more than 700,000 physicians. The American Medical Association is a leading member of The World Medical Association.

Doctors of medicine the world over cherish the same basic ideals of conduct and the same devotion to the welfare of mankind. The World Medical Association is cultivating the common purposes of the profession. This growing community of interest is a source of strength to the physicians in every land.

Already, by solid accomplishments, The World Medical Association has earned the right to call itself "the international voice of organized medicine." Thanks largely to the United States Committee and similar supporting committees of physicians in other leading nations, W. M. A. has a well-tried constitutional structure, a small but efficient secretariat, and a trilingual journal whose world-wide influence and value to the profession is rapidly growing. The permanent office of the secretariat—which serves both the Association and the United States Committee—is located in the United States.

The membership of the United States Committee has been growing slowly but steadily. In 1955, the Committee reached its first important milestone of growth: a membership of 5,000 American physicians.

Even with this modest membership, representing scarcely 3 per cent of American medicine, important achievements have been registered, many of which would have been impossible if the American pharmaceutical and related industries had not consistently matched the financial support given the United States Committee by its physician members.

Last year, 176 members of the United States Committee attended the Ninth General Assembly of The World Medical Association in Vienna. This privilege is avail-

able to members of national supporting committees. There is unique inspiration, personal enjoyment, and intellectual stimulus in meeting our colleagues from many lands, and in helping to formulate programs that may have incalculable benefits for the profession and for the welfare of the world.

The World Medical Association assists traveling physicians by providing them with introductions to colleagues in other countries, by making speaking engagements for them abroad, by acquainting them with visiting doctors from other countries, and, of course, by sending the "World Medical Journal" to members of all national supporting committees.

In 1953, The World Medical Association sponsored the First World Conference on Medical Education, held in London. Representatives from many nations have reported concrete benefits from this epochal meeting in terms of better standards and practices in medical education in their countries. A Second World Conference on Medical Education is now being planned for 1959, to be held in the United States.

Two other World Medical Association accomplishments that have brought great credit to our profession and strengthened its solidarity throughout the world were the promulgation in 1948 of the Declaration of Geneva, comprising a modern restatement of the Hippocratic Oath, and the adoption in 1949 of an International Code of Medical Ethics.

The activities of W. M. A. in the field of social security are of particular interest to American physicians. They have revealed boldly and unmistakably the physician's inherent and universal need for freedom from third-party interference with the practice of medicine. Such activities should not only fortify but inspire the efforts of American medicine to solve our socioeconomic problems without resort to governmental subsidy or control.

On the international stage, The World Medical Association has endeavored to counter efforts of the International Social Security Association and the International Labour Organization to promote state medicine under social security programs. The World Medical Association has earned the respect of the International Labour Organization for its defense of the

interests of medicine against the International Labour Organization Convention for Medical Socialization in 1952. Now The World Medical Association is attempting to wrest from the International Labour Organization the recognized world leadership in the field of occupational medicine.

The World Medical Association has engaged in efforts to protect medical research; to safeguard the National Pharmacopoeias, and the rights of individuals discovering new drugs and agents to name them.

The World Medical Association has served the profession by representing it in relation to the World Health Organization—the official health agency of the United Nations. In the attempt by WHO and other agencies to draft an International Code of Medical Law, W. M. A. has insisted that such a code be based upon ethical principles acceptable to the profession.

For all these activities, and for many more which demand our attention, additional funds are needed. Each new member not only contributes his nominal membership dues, but, more vitally, he lends his name and influence to the program of the W. M. A. and of its United States Committee.

America's world leadership challenges America's physicians to make the United States Committee a truly impressive and representative body of American physicians.

Every individual physician in the U. S. A. is eligible for membership in the United States Committee. Annual membership dues are \$10.00. The dues for Patron Members are \$100.00 or more. Many of our members regularly make contributions to the U. S. Committee, in addition to their annual dues. All such contributions to the United States Committee of The World Medical Association are tax deductible.

As the international voice of organized medicine, The World Medical Association is speaking for you. It is seeking to promote and protect your interests. You are urgently invited to help these efforts along, by joining the United States Committee, and participating in its work.

A. M. E. F. FALL CAMPAIGN

A House Committee of the United States Congress has this last month mailed a questionnaire to most medical organizations

relative to federal aid to medical education. The implications of this questionnaire are apparent to all of us.

As you know, the American Medical Education Foundation was organized and sponsored by the American Medical Association in 1951 to seek financial contributions in behalf of the medical schools. The medical profession's annual goal is \$2,000,000 and this sum is needed in addition to funds contributed annually from other sources. Industry and business are asked to assist in raising the additional amounts to meet the \$10,000,000 operational deficit of our medical schools annually. Unless we reduce this deficit, the practice of medicine as we know it today will no longer exist.

In 1955 the A. M. E. F. disbursed \$1,120,000 to the medical schools. Since 1951 the total forwarded by the Foundation has been \$4,684,312. Together with contributions from industry collected through the National Fund for Medical Education \$9,598,491 has been made available to the schools since 1951.

The fifth annual report of the Foundation shows that of the 2,321 Alabama physicians only 139 contributed to the Foundation in 1955—or 5.9%. During the same period 234 Alabama physicians made financial contributions totaling \$7,126.25 directly to the alumni programs of their own schools. Therefore in 1955 but 10.9% of this state's medical profession aided medical education.

These statistics prove conclusively that our physicians need to be educated to the pressing financial need that exists in our medical schools and my appeal this month is directed to those members of the profession who have not yet given their financial support either to the American Medical Education Foundation or to the medical schools from which they graduated.

By contributing to the A. M. E. F. the medical profession is factually stating its depth of conviction in the present character of our medical schools. Additional solid response from our profession will stimulate a like response from business and industrial groups. Dr. Louis H. Bauer, A. M. E. F. President, points out that "As long as our institutions of higher learning remain free from federal subsidy and control, the future freedom of this nation is as-

sured and the rights of the individual protected."

Dr. Henry G. Hodo, Jr., Fayette, is Chairman of the State Medical Association's Committee on A. M. E. F. and contributions may be sent directly to him for transmission to the Foundation.

USE ONE SYLLABLE WORDS, BE NATURAL

A kindly, 74-year old, Bloomington (Ill.) eye specialist who has been practicing his profession for a half century urges his colleagues to use one syllable words and to adopt a relaxed attitude and natural behaviour in discussions of ailments with patients.

It took him time to learn that this was the effective approach, Dr. Watson Gailey, head of the Gailey Eye Clinic, told the combined 10th biennial congress of the International College of Surgeons and the 21st annual congress of the United States and Canadian sections.

Dr. Gailey was graduated from the University of Illinois College of Medicine, Chicago, in 1904, and was licensed to practice in that year.

"In my early years, inwardly, I felt incompetent to a degree, but I must admit that I was saturated with a feeling of importance," he said. "In my explanations as to the cause of my patients' dilemmas, I used words and phrases that confused me as well as the patient.

"A hyperdignified attitude, along with a stiff pontifical demeanor and multisyllable words in discussing his ailments, was as bewildering to the patient as it was to me.

"Professors and their assistants, whom I admired for their knowledge, and a charity hospital training were responsible for this idiotic pose. Looking wise, as though I were in deep thought (not puzzled)—just deep thought, was a favorite indulgence, but I soon learned that it was a bad practice. I also learned that it was not a disgrace to employ the phrase 'I don't know' to some questions which were asked of me."

Dr. Gailey performed his first cataract extraction in 1905. The technique was a far cry from that used today. The patient was a farmer, "a pop-eyed individual in his 60s," completely blind for nine years.

Preliminary preparations for two days consisted of the prescribing of medicine

which required frequent trips to a little house back of his home, despite protests of the patient that there was no need for such drastic action. Then, the patient reported to the hospital.

"The upper half of his face was scrubbed with soap and water, making a lather comparable to that depicted on the Gillette TV Friday night fight program," Dr. Gailey said.

The operation was carried out with what might be considered crude instruments today and with the plentiful use of argyrol and boric acid as antiseptics. At one stage, the cataract mysteriously disappeared. After due search, it was located "resting peacefully on my gown directly under my chin," Dr. Gailey said. Three weeks later, the farmer had 20/30 vision with correction.

Contributing to the improvement in eye operations today, Dr. Gailey said, are the more intelligent preparation of the patient, the selection of a better variety of anes-

thetics, the introduction of antibiotics, more refined instruments, and the availability of drugs to combat postoperative complications.

Commenting on the progress which has been made in the training of eye specialists, he said:

"The well-trained ophthalmologist of today, at the end of five years, is better prepared to execute a lens extraction than I was able to manage after a quarter of a century of practice, for the simple reason that intense apprehension is not badgering him throughout the operation."

He has discarded one opinion he held a quarter of a century ago.

"When I was 50 years old, I was thoroughly convinced that the physician of 70 should be retired with the label of 'Old Fogey,'" Dr. Gailey concluded. "I have changed my mind, since one never grows too old to learn."

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

IT TAKES GUTS

W. A. Dozier, Jr.

Executive Secretary

The May 15, 1956 issue of the Southern States Industrial Council *Bulletin* carried an editorial entitled "Where is the Middle of the Road?" by Thurman Sensing. Here is what Mr. Sensing had to say.

"The 'middle of the road' philosophy has attained great popularity in this country in recent years and has been sponsored by many leaders in responsible places.

"We have not agreed, and we do not agree, with any such philosophy. We believe a man ought to be for something or against it. That is the only way right can be finally determined from wrong. That is the only way to know where a man stands.

"This viewpoint is well illustrated by St. John the Divine in the Book of Revelation when, writing to the churches of Asia, he said, 'I know thy works, that thou art neither cold nor hot: I would thou wert cold or hot. So then because thou art lukewarm,

and neither cold nor hot, I would spue thee out of my mouth.'

"The American people are so constituted, or at least they have been so constituted, that they will not long support an individual or political party which refuses to take a stand. Such an attitude is traditionally known as 'fence straddling'; it has now become more politely known as 'middle of the road.'

"The great leaders of our history have not been men of this type. If those who are taking such a position now are ever acclaimed as great by future historians, then we can be quite sure that by that time we shall have renounced all the principles upon which our philosophy of government was founded. What sort of place would George Washington occupy in American history if he had compromised with the British? The 'Great Compromiser' Henry Clay, never got anywhere in American politics; he was defeated for the presidency by the forthright Andrew Jackson. Stephen A. Douglas tried to take a similar attitude; he was beaten by Abraham Lincoln, who took

a stand. No man in American history is more respected than Robert E. Lee, who took a stand even though he lost.

"Actually, 'fence straddling' or 'middle of the roading' or whatever you want to call it is not a philosophy at all; it is a lack of philosophy. Politicians who take this position undoubtedly do so because they think it is a safe place—when they are really in no safer place than is the driver who straddles the line down the middle of the highway. They are subject to being hit from both sides—and they should be hit, because they are endangering everybody on the highway.

"The terrible danger that now faces us in this country is that the people apparently have no choice except between going down the middle of the road—with its considerable element of risk—or going down the left side of the road altogether—which is completely perilous. They have no opportunity to go, and they have no leadership to take them, down the right side of the road.

"Moreover, the location of the middle stripe down the road is now being determined by which political party can promise the people the most subsidies, the most federal aid, the most social benefits of various sorts. This means that the middle stripe is continually moving farther to the left, because as one party promises great benefits, the other party counters with promise of even greater benefits.

"It is the case now, however, that the attitude of a large percentage of our people who would call themselves conservatives has been, and apparently continues to be, that it is safer to go down the middle of the road than it is to go down the left-hand side of the road. They therefore choose the lesser of the two evils and then, so long as nobody gets hit and times remain prosperous generally and they are making money in particular, they give no thought to the future.

"They just don't seem to realize that the gradual encroachment of the Federal Government into the lives of the people, through usurpation of states rights, through federal aid to education, federal housing, federal participation in highway construction and medicine and public health and many other ways, including continued federal support for the farmers (all of which is of course being paid for with the people's own money), is destroying any op-

portunity they have to choose between our traditional American free enterprise system and a socialistic federal government—between the right side of the road and the left side of the road. As it is, their only choice must be between degrees of socialism—and so long as each party keeps trying to promise more than the other, both degrees of socialism keep growing larger and larger."

Mr. Sensing's article was slanted toward politics, but his basic thought should be applied to our everyday lives. Sure, it's much easier not to think something through and instead brush it off by going with the crowd or trying not to take a definite stand. Do we do this through slovenliness or cowardice? Perhaps we fear the taunts of those who disagree. Sometimes it takes guts to stand up for our beliefs.

Aviation Suit Adapted for Hospital Use—The G-suit or antigravity suit which is standard wearing apparel for pilots of high-speed planes has been modified for use during certain types of surgery.

G-suits are worn by flyers to prevent black-outs that occur when they pull their planes out of fast dives. The standard aviation garment consists of inflatable leggings and an abdominal binder, which, by constricting the lower part of the body, prevent pooling of blood.

Drs. W. James Gardner and Donald F. Dohn used the aviation garment to prevent dangerous drops in blood pressure during certain head and neck operations carried out with the patient in a sitting position.

Because they found the standard garment too unwieldy and difficult to put on the patient, they devised a simpler garment. It is two sheets of plastic sealed at the edges to form a large inflatable bladder. This is placed beneath the patient, the edges are folded over so as to enclose him from the waist to the ankles and is drawn snug by lacing. It may be inflated from a tank of gas if there is a sudden drop in blood pressure.

The new G-suit has an advantage over the aviation suit in that it also compresses the pelvic area and buttocks. In addition to using the suit during head and neck operations, the doctors have used it to combat shock resulting from hemorrhage.

Their idea is not new, the doctors said in the September 22 Journal of the American Medical Association. A pneumatic suit, made of a double layer of rubber and inflated with a bicycle pump, was described by G. W. Crile in 1903. Its use was plagued by failures because the suit had a tendency to spring leaks.

Drs. Gardner and Dohn are from the Cleveland Clinic Foundation and the Frank E. Bunts Educational Institute.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

PROTECTION AGAINST UNDULANT FEVER

What's in a name? Obviously a great deal. When an astronomer looks through his telescope and sees a new star, he or someone else searches about for a name for it. Or when a different kind of organism floats into view under the microscope's lens, the scientist notes its characteristics, and gives it a title to distinguish it from many, many others.

Of course, names do change through the years, for various reasons. An original may be discarded in favor of a more descriptive tag. Or in the scientific area, a discovery may eventually take the name of the finder, as a memorial to his contribution, more or less. One particular disease, for example is known to many people as brucellosis, after the British scientist Dr. David Bruce, who isolated one of the organisms which produce the infection. But few diseases, perhaps, have been called by as many different names as this one. Among them are Mediterranean fever, Malta fever, Bruce's septicemia, Cyprus fever, goat fever, continued fever, slow fever and mountain fever!

However, one name that has stuck through the years is the one this disease was given originally, the name of undulant fever. British medical officers chose this name for the strange and baffling illness that attacked troops sent to Malta during the last century. The infection seemed to them to come in waves or undulations, in much the same way as the Mediterranean Sea's waves, swelling into giant ridges, breaking and receding, and then returning to repeat the same process.

While the name of this disease tells us that it "goes and comes," so to speak, there are many other aspects of it that the name does not reveal. Undulant fever is a chronic disease, the kind we hear so much about these days. But it also may be extremely debilitating or weakening to the victim. And recent research points to this disease as a cause of some seemingly unre-

lated ailments, such as certain kinds of back pain.

The importance of undulant fever, then, rests mostly on its chronic, weakening nature. For it is rarely fatal, although occasionally it is determined to be the cause of death in Alabama and elsewhere.

Those British medical officers in the late nineteenth and early twentieth centuries were the first to study and find out basic information about undulant fever. Under the leadership of Dr. Bruce, those investigators made the decision to conduct experiments using laboratory animals. But on the tiny island of Malta, many miles from England, they were handicapped because they did not have any rabbits or guinea pigs, the types of animals often used for these purposes. However, there was a plentiful supply of goats, so they were used as substitutes.

But far from being a handicap, use of the goats turned out to be a real advantage in disguise. For these animals held the key to the disease's mysteries, or some of them at least. Shortly, Dr. Bruce and his associates found that milk from these goats contained the same organism, in great quantities, that Dr. Bruce had isolated from human victims some years earlier. And so, undulant fever among the British troops on the island practically disappeared when they stopped drinking goats' milk.

Dr. Bruce's discovery was the first major breakthrough on undulant fever. The next important information came early in this century. A Danish veterinarian, named Dr. Bernhard L. F. Bang, was studying a common disease in cattle, and one that posed a serious economic problem, especially in his native land known for its dairy products. That disease was infectious abortion, which causes cattle to lose their calves when it attacks. Dr. Bang succeeded in isolating a rod-shaped organism which causes this disease so costly to cattle farmers.

Still a third important addition to undulant fever knowledge came in 1918 from America. One Alice Evans, an employee of the U. S. Department of Agriculture, drew

a connection between undulant fever and Bang's disease, another name for infectious abortion in cattle. She maintained that the organisms Dr. Bruce and Dr. Bang had isolated were identical.

Undoubtedly, until that time, everyone had considered undulant fever and Bang's disease to be two separate infections with no connection at all. But Miss Evans was claiming that both were forms of the same disease. The undeniable proof of this woman's theory was to come in 1924. A scientist working at Johns Hopkins University, Dr. C. S. Keefer, for the first time definitely attributed undulant fever in a human being to cows' milk, just as Dr. Bruce had attributed it to goats' milk many years earlier in Malta.

The next development was the discovery by scientists that there was still another source of undulant fever. This type occurs normally in swine.

Undulant fever or brucellosis, then, is a zoonosis. That is, it is a disease which can be transmitted from animal to man. Undulant fever is only one of 89 known such diseases or zoonoses.

There are three known organisms in a "family" of bacteria which cause undulant fever. The first is the one Dr. Bruce found, the goat strain. Now called by the scientific name of *Brucella melitensis*, this is the most virulent or poisonous strain for human victims. The second type is *Brucella abortus* or the cattle strain. However, this organism does not just affect cows only. It can produce infectious or contagious abortion in mares, sheep, rabbits and guinea pigs, and, finally, but by no means least, it can be transmitted to man, although it is the least virulent to human victims of the three types. The third and final type of undulant fever organism is *Brucella suis*. It causes abortion in swine, and is called hog strain, appropriately enough.

The animals we have mentioned serve as a natural reservoir for undulant fever or brucellosis infection. Thus, man becomes a victim through contact with infected animals. The contact may be through the food products from these animals, chiefly goats, cattle and swine. Milk and dairy products are good examples of agents for bearing undulant fever from animals to humans. But the infection is also spread by contact with the tissues of infected animals.

The organisms producing some other diseases often must find an opening in a person's skin in order to cause infection. But it is possible for the undulant fever organism to enter the victim's body through broken as well as unbroken skin. This invasive character of brucellosis germs explains why even people who work with the organism in the laboratory frequently become infected with it.

Shortly after Dr. Keefer at Johns Hopkins University demonstrated that undulant fever could be borne to the individual by milk from infected cows, the U. S. Public Health Service began a reporting system. That was in 1927, and before that time undulant fever was practically unheard of in this country. Actually, cases undoubtedly occurred, but only when health departments began keeping records did officials have basic information about its prevalence.

And even now there is something about undulant fever which leads health officials in Alabama and elsewhere to believe that the true picture is not outlined by the statistics on the record books. That something about undulant fever is the real difficulty doctors face in diagnosis. This infection has truly been called a great masquerader because it appears to mimic so many other diseases.

The onset of undulant fever, for example, may be very much like the beginning of an influenza attack. The first signs of its presence may be a tired feeling, a headache, high fever, chills and drenching sweats. But, later on, the victim may think he has arthritis when he experiences joint pains, backache and other complaints. Thus, the doctor usually relies not only on the symptoms of the patient but he turns to the laboratory, as well, to help him in making a diagnosis.

Such attacks as the one described are sometimes called acute cases of undulant fever. Moreover, repeated attacks like this one may occur. Other patients with the latent type of this infection may have only vague symptoms, which may be dismissed and only rarely brought to the doctor's attention.

Thus, since the figures on undulant fever's occurrence are provided by the reports doctors make on the cases they see, it is easy to understand why these records most probably are not complete. For, obviously, the

doctor cannot report a chronic, mild case in a person he has never seen. In this regard, the report of one doctor to a recent session of the California Medical Association holds interest. A summary of this report, reprinted in the May 21, 1956 issue of *Medical News*, published by Ciba Pharmaceutical Products, Inc., points to recent research, which in turn indicates that 10 per cent of all Americans have been infected with *Brucella* bacteria.

Do you remember how those British troops on Malta protected themselves from undulant fever? When they found out that the organisms probably entered their bodies through goats' milk, they stopped drinking the milk, and the disease practically disappeared. Then it was found that undulant fever could be transmitted through milk from infected cows, as well.

However, undulant fever can be transmitted through one kind of milk only. And that kind of milk is the so-called raw kind which has not been processed. It cannot be transmitted through pasteurized milk, and dairy products, for pasteurization kills the undulant fever organisms. Thus, the use of pasteurized milk and dairy products only is one way to prevent undulant fever.

The protection that pasteurized milk provides is sufficient precaution for many people to take. However, it is not enough for some other individuals. These people who need to take additional precautions are the ones who are occupationally exposed to the bodies and tissue of infected animals. This group includes veterinarians, farmers, packinghouse workers, operators of rendering plants, and the various other handlers of livestock.

Fortunately, Alabama has experienced a steady decline in the number of reported cases of undulant fever in recent years. The State Health Department's records reveal that 76 cases of this disease were reported in 1949. But about six years later, or in 1955, only 11 were reported during those 12 months.

In the absence of studies on this decline, many factors are considered as responsible. Chief among them are the increased use of pasteurized milk, and the effect of better diagnosis and treatment methods.

Also, in Alabama, there have been intensified calfhoo vaccination efforts. The

vaccination of calves gives a measure of protection in that it promotes resistance to undulant fever in these animals. And this measure, too, goes to the root of the undulant fever problem. The eventual victory over this disease will come when it is eradicated in livestock. Efforts are continuing in Alabama and elsewhere to free livestock herds of Bang's disease or undulant fever. The vaccination of calves is one way to achieve this end, and the treatment of infected animals is another.

Until undulant fever is eradicated from livestock, all of us, and especially those who work with animals that might be infected, can be aware of this disease's potential danger. And such awareness, in turn, should promote the precautions necessary for the community's health.

All Infant Hip Abnormalities Need Immediate Attention—Every newborn infant who shows even the slightest sign of abnormal hip development should be treated immediately, a Chicago physician said recently.

Dr. Sherman S. Coleman made his recommendation because it is impossible to know which cases will heal by themselves, which will persist as a partial dislocation, and which will progress to a true dislocation.

The simplicity of the treatment, and the fact that the earlier the treatment is begun the better the results will be, make it "obligatory" to treat all infants showing signs of abnormality, he said in the October 6 Journal of the American Medical Association.

Treatment should be started within days—or even hours—after birth, he said. Most patients treated early are restored to normal within a few months.

Every infant should receive a thorough orthopedic examination immediately after birth and should be repeatedly examined during the first year of life since the abnormal developmental process may be so obscure as to go undetected for several months.

If a partial dislocation goes unnoticed in the early years it may provide the groundwork for a far-advanced and disabling case of osteoarthritis of the hip joint in adult life, he said.

Dr. Coleman examined 3,500 newborn infants at Primary Children's Hospital, Salt Lake City, and found 32 cases of congenital dysplasia (the medical term for abnormalities of development) of the hip. This amounts to one case in every 110 births, a rate slightly higher than is usually reported in the U. S., but close to the rate in Russia and much less than the one in 10 births reported in Italy, he said. Of his patients, 27 were girls and five boys.

Dr. Coleman is now with the department of orthopedic surgery, Northwestern University, Chicago.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

August 1956

Examinations for diphtheria bacilli and Vincent's	78
Agglutination tests	1,004
Typhoid cultures (blood, feces and urine) ..	885
Brucella cultures	4
Examinations for malaria	112
Examinations for intestinal parasites	3,683
Darkfield examinations	9
Serologic tests for syphilis (blood and spinal fluid)	25,252
Examinations for gonococci	1,612
Examinations for tubercle bacilli	3,646
Examinations for Negri bodies	115
Water examinations	2,553
Milk and dairy products examinations	5,374
Miscellaneous examinations	525
Total	44,852

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BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	July	Aug.	E. E* Aug.
Typhoid and paratyphoid	4	5	10
Undulant fever	1	1	2
Meningitis	6	10	7
Scarlet fever	236	235	17
Whooping cough	48	54	58
Diphtheria	4	2	16
Tetanus	1	2	4
Tuberculosis	193	186	213
Tularemia	2	0	0
Amebic dysentery	1	3	1
Malaria	1	0	17
Influenza	43	87	23
Smallpox	0	0	0
Measles	382	120	29
Poliomyelitis	11	23	62
Encephalitis	2	1	1
Chickenpox	16	6	6
Typhus fever	0	2	4
Mumps	158	65	37
Cancer	405	372	333
Pellagra	0	0	2
Pneumonia	154	80	98
Syphilis	93	111	260
Chancroid	1	3	6
Gonorrhea	367	400	473
Rabies—Human cases	0	0	0
Positive animal heads	28	28	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA.

FOR JUNE 1956

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During June 1956			Rates* (Annual Basis)		
	Total	White	Non-White	1956	1955	1954
Live births	6239	3842	2397	23.2	22.7	24.3
Deaths	2079	1276	803	7.7	7.5	7.7
Fetal deaths	152	74	78	23.8	23.4	26.6
Infant deaths—						
under one month	131	73	58	21.0	22.6	20.8
under one year	189	94	95	30.3	29.7	30.4
Causes of Death						
Tuberculosis, 001-019	21	11	10	7.8	9.8	12.5
Syphilis, 020-029	4	1	3	1.5	1.9	3.0
Dysentery, 045-048	1		1	0.4	1.1	1.5
Diphtheria, 055						0.4
Whooping cough, 056	1		1	0.4	0.4	0.4
Meningococcal						
infections, 057	1	1		0.4	0.4	0.8
Poliomyelitis, 080, 081					1.1	1.5
Measles, 085						0.4
Malignant neoplasms, 140-205	282	185	97	105.1	111.5	89.2
Diabetes mellitus, 260	26	16	10	9.7	6.4	8.0
Pellagra, 281						1.5
Vascular lesions of central nervous system, 330-334	275	157	118	102.5	88.6	107.8
Rheumatic fever, 400-402	5	3	2	1.9		1.5
Diseases of the heart, 410-443	666	450	216	248.1	243.7	241.5
Hypertension with heart disease, 440-443	128	62	66	47.7	49.2	61.9
Diseases of the arteries, 450-456	52	33	19	19.4	14.6	15.9
Influenza, 480-483	12	8	4	4.5	1.1	1.9
Pneumonia, all forms, 490-493	40	19	21	14.9	13.5	19.7
Bronchitis, 500-502	2	1	1	0.7	0.4	0.4
Appendicitis, 550-553	3	1	2	1.1	0.4	0.8
Intestinal obstruction and hernia, 560, 561, 570	13	9	4	4.8	3.8	6.8
Gastro-enteritis and colitis, under 2, 571.0, 764	16	2	14	6.0	3.4	8.0
Cirrhosis of liver, 581	13	9	4	4.8	3.4	4.6
Diseases of pregnancy and childbirth, 640-689	4		4	6.3	9.7	9.1
Congenital malformations, 750-759	37	25	12	5.9	7.9	4.7
Accidents, total, 800-962	171	120	51	63.7	57.4	57.3
Motor vehicle accidents, 810-835, 960	74	57	17	27.6	27.4	19.0
All other defined causes	349	198	151	130.0	140.4	118.1
Ill-defined and unknown causes, 780-793, 795	85	27	58	31.7	33.4	31.1

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population

AMERICAN MEDICAL ASSOCIATION NEWS

UNIFORM CHEMICAL LABELING LAW PROPOSED

The American Medical Association's Board of Trustees has authorized a first step toward protecting the public from potentially dangerous household and commercial chemicals.

The Board authorized the A. M. A. committee on toxicology to draft a recommended "model" law on labeling of many possibly harmful chemicals not now regulated.

It would serve as a guide for writing regulations which would require labels to show such information as the product's contents, its possible dangers, directions for safe use, and first aid instructions.

Products involved include auto care and repair materials, paints and paint removers, putty, soldering fluids, household cleansers and polishers, heating and cooking fuels, laundering items, art supplies, and toys containing chemicals.

The committee's secretary, Bernard E. Conley, estimates there are at least a quarter of a million different trade-name substances now on the market. Without proper labeling, physicians and the public cannot possibly know what harmful material they may contain or how to treat poisoning from them.

The proposed law is intended to reduce careless and ignorant handling and storage of chemicals in the home, in small businesses and in other areas where control of exposure to the chemicals is not as efficient as it is in the manufacturing process, Conley said.

The law should be an "enabling act" under which later regulations could spell out necessary details for enforcement and compliance, according to Dr. Torald Sollmann, Cleveland, committee chairman. The legislation should be flexible and not readily out of date.

The A. M. A. committee plans to consult other organizations and individuals who are interested in the problem. These include the American Academy of Pediatrics, American Public Health Association, American

Pharmaceutical Association, National Safety Council, leading trade associations, and various state and national government regulatory agencies.

INFANT EYE DISEASE RELATED TO LENGTH OF TIME IN OXYGEN

Premature infants should be given additional oxygen only in emergencies and then for as brief periods of time as possible, according to three Detroit researchers.

They based their recommendation on a recent study which showed that length of exposure to oxygen is the important factor in producing retrolental fibroplasia, a serious eye disease which may result in blindness. This differs from earlier studies indicating that the concentration of oxygen was the causative factor.

Retrolental fibroplasia was first recognized as a disease of premature infants in 1942 and is now the major cause of blindness among children. Oxygen administration to premature infants was implicated as a possible cause in 1952.

However, because the disease appeared to occur haphazardly and because no information was available on death rates due to curtailing oxygen for premature infants, doctors have been reluctant to change their routine of oxygen administration.

The Detroit researchers now report that restricting oxygen not only lessens the chances of retrolental fibroplasia but also appears to have no effect on an infant's chances for survival.

The report in the October Archives of Ophthalmology, published by the American Medical Association, is based on a cooperative study made in 18 hospitals between July 1, 1953 and June 30, 1954 in an attempt to clear up questions about oxygen's effect on RLF and mortality rates.

Of the 786 premature infants born in or brought to the 18 hospitals during the year, 586 were followed for at least two and a half months. Fifty-three infants were given oxygen for 28 days, the standard procedure at the time. The other 533 infants were

given oxygen only when breathing difficulty occurred.

The study showed that, on a percentage basis, twice as many infants in the routine-oxygen group developed the early active stages of the disease as did infants in the curtailed-oxygen group. The rate of progression to the later scarring stages which produce permanent damage to the eyes was three and a half times greater in the routine-oxygen group than in the curtailed-oxygen group.

The rate for both active and cicatricial stages increased as the duration of exposure to oxygen increased, but was not affected by the concentration. Rate of withdrawal from oxygen did not appear to play a role, they said.

The incidence was much greater in infants of multiple birth (twins or triplets) than of single birth. The authors said the reason for this is unknown, but it may be related to the degree of oxygen saturation in the blood. A multiple-birth infant might have less oxygen in his blood before birth than a single-birth baby. When he is given additional oxygen, a relatively greater difference in blood-oxygen saturation before and after birth could result, which might be "a greater insult" to the blood vessels of the eye.

The authors are V. Everett Kinsey, Ph. D., and June Twomey Jacobus, B. A., of the Kresge Eye Institute, Detroit, and F. M. Hemphill, Ph. D., of the School of Public Health, University of Michigan, Ann Arbor.

The cooperative study was supported by grants from the National Institute for Neurological Diseases and Blindness of the U. S. Public Health Service, Bethesda, Md., the National Foundation for Eye Research, Boston, and the National Society for the Prevention of Blindness, New York.

EDITORIALS WARN AGAINST IMPROPER USE OF DRUGS

Warnings against the improper use of two types of medicine—drugs sold "over the counter" without a prescription and barbiturates sold only on prescription—were issued in the October 13 Journal of the American Medical Association.

The warnings, along with suggestions of how physicians and pharmacists can prevent improper use, appeared in two Journal editorials.

The great danger in using "over-the-counter" medicines lies in misreading or not reading labels, one editorial said. In addition, there is always the possibility of delaying proper medical diagnosis because the individual may temporarily feel well or his symptoms may be "masked" by the drug's action.

Most non-prescription drugs sold today have been proved to be "reasonably" harmless. In fact, they can't be sold without a prescription until trials have shown they have no harmful side effects when taken in the proper amounts. The danger lies in excessive dosage.

The editorial explained that current federal legislation requires a prescription for the sale of any drug which is potentially unsafe when used without medical supervision. However, a manufacturer or even an interested person who believes the prescription restriction is no longer necessary, and has evidence to support his contention, may petition the Food and Drug Administration to allow over-the-counter sales, provided labeling includes adequate directions and warnings.

It is here that physicians have a responsibility, the editorial said. By reporting any harmful side effects resulting from the use of a prescribed drug, physicians may prevent a potentially harmful drug from going on sale without a prescription.

In another editorial, Dr. Harris Isbell of the National Institute of Mental Health, Addiction Research Center, U. S. Public Health Service Hospital, Lexington, Ky., said that symptoms of barbiturate intoxication have been found to be similar to those of chronic alcoholism.

If, as it appears, alcohol and barbiturates actually cause similar nervous system changes, adequate doses of either should partly or completely suppress symptoms resulting from the withdrawal of the other. This helps explain how alcoholics can substitute barbiturates for alcohol and vice versa.

Persons who are intoxicated by barbiturates are menaces, both to themselves and others, Dr. Isbell said. For this reason, the medical and pharmaceutical professions bear a heavy responsibility in prescribing and dispensing barbiturates.

Great care should be used in prescribing barbiturates for unstable persons, and such

persons should be watched carefully, he said, adding that simple insomnia is seldom a valid reason for using barbiturates. He also warned that physicians should not prescribe a barbiturate for a stranger unless "the indication for the drug is unmistakable."

Prescriptions should be limited in amount and the laws against refills without a new prescription should be strictly observed, he said.

MEPROBAMATE MAY CAUSE ALLERGIC REACTIONS

Several cases of allergic reactions to the tranquilizing drug meprobamate (Miltown or Equanil) have been reported by two Beverly Hills, California, physicians.

The reactions took the form of skin eruptions and itching, extreme excitement, muscular paralysis or stomach upsets, Dr. Henry T. Friedman, an allergist, and Dr. Willard L. Marmelzat, a dermatologist, said in the October 13 Journal of the American Medical Association.

The desire for a harmless pill that will almost magically return man to an emotional state free from everyday stresses and strains is a deep-rooted one, they said. There has been widespread indiscriminate use of the drug, especially in southern California.

Scarcely a day goes by without some laudatory public mention of "this wonderful new tranquilizing drug," but few reports of adverse reactions to the drug have been made, they said.

For these reasons the doctors felt they should issue a warning about their 10 cases of allergic reactions to meprobamate. They also mentioned that other physicians in the Los Angeles area have seen, but have not reported, allergic reactions severe enough to require hospitalization.

Five of their patients developed severe skin reactions after taking the drug. One patient broke out with a rash within three hours and another within six hours after taking the first pill. The eruptions usually appeared first on the lower part of the body, but the breast and arms were also affected.

"Paradoxical reactions" were reported in four patients. Three became extremely excited instead of calm after taking the drug. The excitement subsided after the medicine was withdrawn. Another patient developed

diarrhea, cramps and gas after taking two pills. This was surprising, they said, because meprobamate normally does not affect the involuntary muscles of the stomach and intestines. Paradoxical reactions, where sedation is expected and excitement produced, have appeared in relation to the barbiturates and other sedatives, they pointed out.

Another patient developed nausea and double vision resulting from muscular paralysis in the eye after taking only three pills.

The most remarkable thing about their cases was the fact that a patient who had never taken meprobamate would develop the reaction within three to five hours after taking one tablet, they said. Usually in drug reactions, the patient has had prior contact with the compound. A possible reason is that these patients had been exposed previously to chemically related compounds which sensitized them to meprobamate.

Dr. Friedman is instructor in medicine at the University of California at Los Angeles, and Dr. Marmelzat is on the staffs of Queen of Angels Hospital and Santa Rita Clinic, Los Angeles.

LIST HABIT-FORMING QUALITIES OF MEPROBAMATE

A Seattle physician has warned that meprobamate can be habit-forming in a small percentage of cases.

Dr. Frederick Lemere gave his warning because of the unprecedented demand for the drug, because of talk of selling meprobamate over the counter without a prescription, and because it has been advertised as non-habit forming.

He has seen a few individuals show the standard symptoms of addiction, including a psychological craving for the drug based on its pleasant effects, a build-up or tolerance requiring increasingly larger doses to produce the same effect, and withdrawal symptoms when the drug is suddenly discontinued.

However, meprobamate is still the "most helpful and least harmful of all drugs used for the relief of nervous and emotional tension," but its habit-forming qualities for some persons indicates the necessity for careful supervision of its use, Dr. Lemere said in the August Archives of Neurology

and Psychiatry, published by the American Medical Association.

Dr. Lemere noted withdrawal symptoms among some of his patients. These included feelings of "nervousness," "the jitters," or "let down" when the patients missed their usual doses of meprobamate. One patient experienced the first convulsion of his life 10 hours after discontinuing the medicine. While this may be coincidence, the pattern was similar to the convulsions seen after sudden withdrawal from alcohol or barbiturates.

"A psychological dependency on the drug is also undoubtedly created in certain patients," he said.

Many feel so much less tense when taking the drug that there may be an exaggerated feeling of well-being. In most cases this does not appear to be harmful, but in a few patients it may lead to overdosage on the basis that "if one pill helps, three will help three times as much," he said.

Thirteen of more than 600 patients had to discontinue the drug because of excessive self-medication. Several patients under the influence of six or more tablets a day showed all the signs of intoxication, including an exaggerated sense of well-being, confused speech and generalized incoordination.

A few patients have a built-up tolerance to the drug. He observed nine patients who had to take increasing amounts of meprobamate to obtain the same calming effect.

Dr. Lemere also warned that the prescription of meprobamate to alcoholics should be watched closely for abuse, because of the tendency of some alcoholics to take excessive amounts of anything that acts as a sedative.

TEACHER'S "REHEARSAL FOR RETIREMENT" OUTLINED

A school teacher in her early fifties has told the story of her "rehearsal for retirement."

Miss May Isbell Davis, Mogadore, Ohio, was eligible to retire on a small pension after 30 years of teaching, but was afraid to do it. So she decided "to try it on for size" by continuing to teach, but adjusting her finances and leisure activities to simulate retirement.

She explained her plan in the September Today's Health, published by the American

Medical Association. Among the things she learned was the necessity of having a health or emergency fund in retirement.

Her first step in the rehearsal was a realistic adjustment of finances. She estimated that her retirement allowance would be about one-half her present take-home pay. So she started living on half of her salary and banking the other half. She had no plans for the savings accumulating in the bank until she discovered she needed a surgical operation. She used the savings to pay the doctor and hospital bills.

The experience gave her a preview of "the helpless empty feeling of one who faces illness without a backlog of financial security," Miss Davis said, adding that she will continue to teach and to save half of her salary as an emergency fund. She will not retire until it has reached a satisfactory level.

Miss Davis said that living on half of her income challenged her ingenuity, but she learned to arrange her major expenditures so they would not wreck her checking account. She learned to ease the embarrassment of refusing to go out with friends by "openly admitting that I was broke." She quit donating to "the numerous projects and drives which plague the working woman."

She tried a variety of methods of using her leisure time, including oil painting and "digging out" the flute she had once played, before realizing that the one thing she liked to do so well that she forgot to eat was writing.

She started by writing letters to the editor and articles which "rated only another rejection slip." Finally she sold an article for \$150. She put the money in her checking account as a backlog against needing money in a hurry. The money settled, she "got busy at another manuscript."

Miss Davis said she does not think she will ever face the "bugaboo" of feeling friendless and alone—not because she has lived in the same village for many years, but because she has developed "an emotional self-sufficiency which will surely carry over into those later years." She enjoys being alone, going to church or the movies, reading, listening to the radio and walking.

"This phase of my retirement needs no preparation. I have already had a 30-year preview," Miss Davis said.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

December 1956

No. 6

PROGNOSIS IN CONGESTIVE HEART FAILURE

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As Sir Thomas Lewis expressed it best and briefly: "Congestive failure is a condition in which the heart fails to discharge its contents adequately." The word "congestive" added to the term "cardiac failure" implies systemic congestion, including increase in venous pressure, engorgement of the liver and other organs, and absence or presence of edema, peripherally. We thus reach a clinical definition of congestive heart failure: a clinical syndrome in which the heart fails as a pump, and in which there is elevation in venous pressure and engorgement of lungs and liver and, perhaps, peripheral edema.

It is beyond the scope of this paper to discuss the management of congestive heart failure. However, it may be said in passing that patients with congestive failure need strong constitutions to survive the therapeutic hazards to which they are often exposed.

For several years we have been aware of the need of an accurate prognostic guide in the management of patients with congestive failure. This need has become apparent because of the tremendous variation in the longevity of these patients, irrespective of etiology or factors precipitating failure. Early in our practice we noted a significant difference in the ease with which compensation could be restored in an individual who, neither clinically nor electrocardiographically, showed any evidence of arteriosclerotic myocardial changes. This group was in sharp contrast to those patients who did

show significant degenerative changes and whose return to a state of compensation was slow, and frequently only after very energetic treatment.

Wishing to pursue the study of prognosis further, we selected those cases of congestive heart failure admitted to our hospital between 1946 and 1951 for additional analysis. This group represented 433 hospital admissions. Because of the interest in the long range prognosis rather than the immediate one, we have discarded those cases which expired during their first hospital admission. The purpose of this was to exclude those patients who were terminal at the time of their first admission and whose previous treatment by a number of different physicians was not standardized. There were some patients lost to follow-up study because of a two-year absence from practice of the writer. Some of the initial number were readmissions. Therefore, we have a total of 271 cases from which we would like to present some data.

For simplification of study we have divided these cases of congestive failure into four groups, according to etiology: (1) hypertensive heart disease, (2) hypertensive and arteriosclerotic heart disease, (3) arteriosclerotic heart disease, and (4) rheumatic heart disease. There is a fifth but small group of miscellaneous types, including luetic, congenital, thyrotoxic and myxedema, which will not be used in this study.

Patients classed as hypertensive heart disease are those in whom there is no clear cut history of coronary pain and whose electrocardiograms show only left ventricular strain.

From the Gibson Clinic.

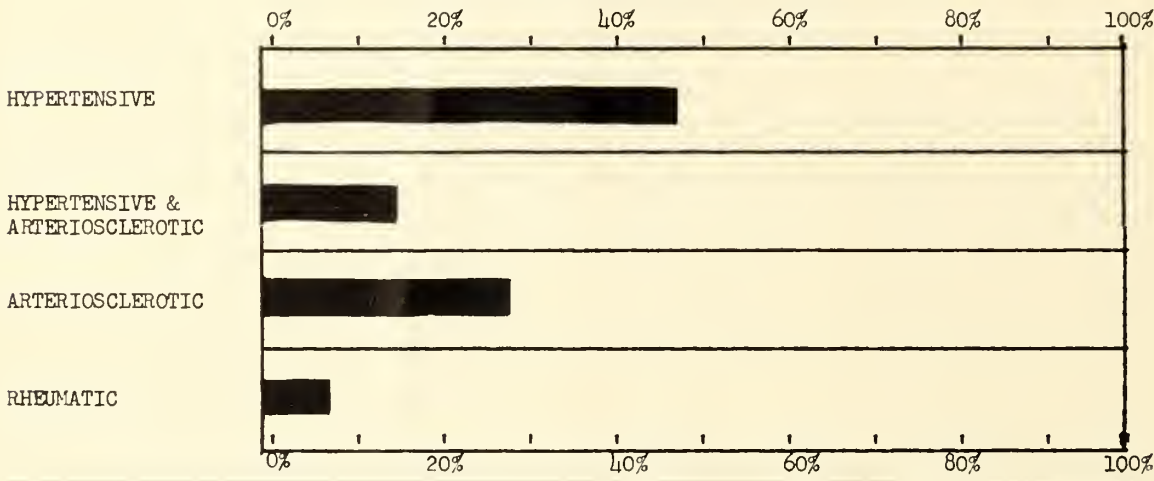
Read before the Association in annual session, Birmingham, April 20, 1956.

The second group, which we have labeled hypertensive and arteriosclerotic heart disease, are those individuals with arterial hypertension who, electrocardiographically, show not only the left strain pattern but arteriosclerotic changes as well.

The arteriosclerotic heart disease group are those individuals who are not hypertensive and who do show marked arteriosclerotic, electrocardiographic changes.

was Digitoxin. Mercuhydrin and later Thiomerin were the most frequently used parenteral diuretics. Drastic salt restriction was used in relatively few cases, with most patients following only moderate salt restriction. An oral mercurial diuretic was administered in all cases and continued successfully in a large percentage. Because of gastrointestinal intolerance and mercurial sensitivity its use was stopped in some

CHART 1
DISTRIBUTION OF CASES



All of the cases presented were treated by the writer and the method of treatment was fairly uniform, though certain minor variations were necessary in some cases. The digitalis preparation most frequently used

cases. Ammonium chloride, resins, potassium and other adjuncts were used as indicated.

In chart 1 one sees the distribution in percentage of these cases. They are: hyper-

CHART 2
AVERAGE AGE AT ONSET OF FAILURE

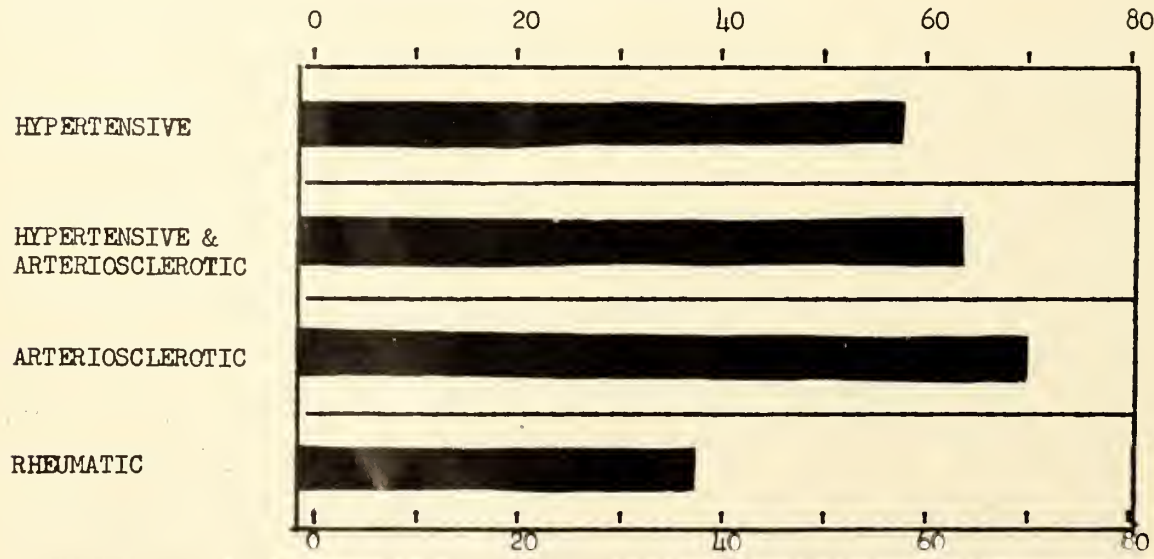


CHART 3
HYPERTENSIVE HEART DISEASE

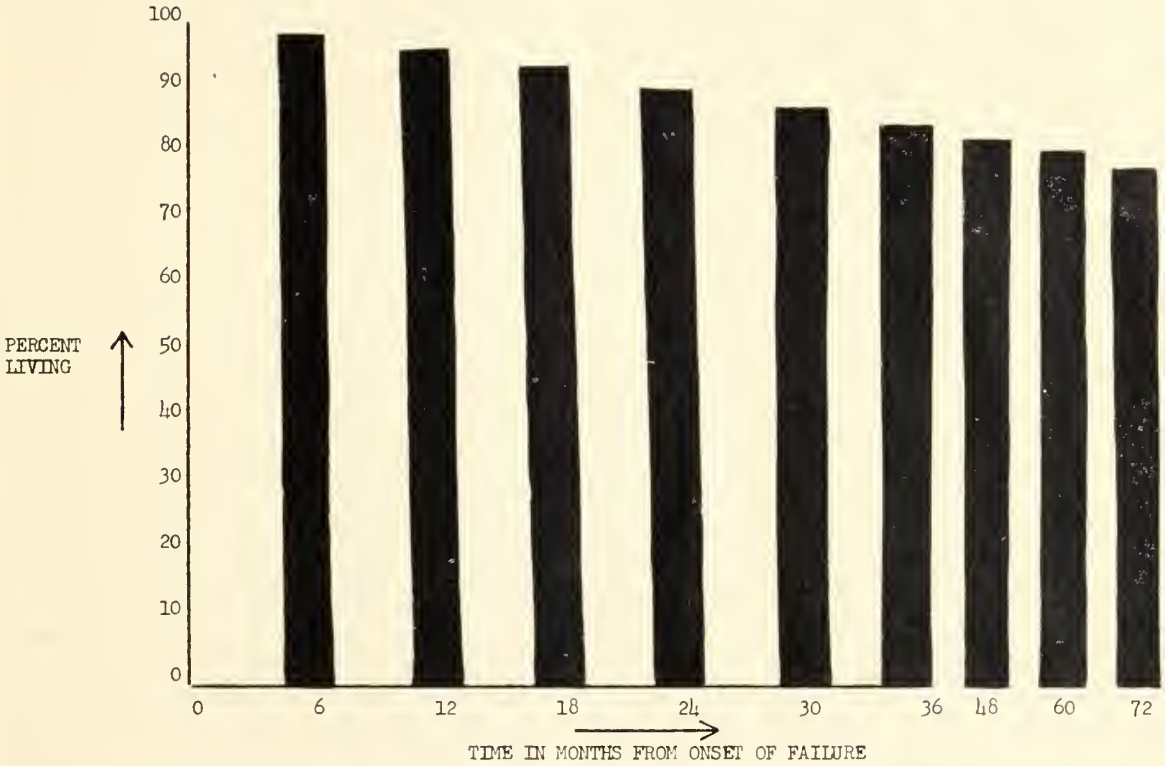
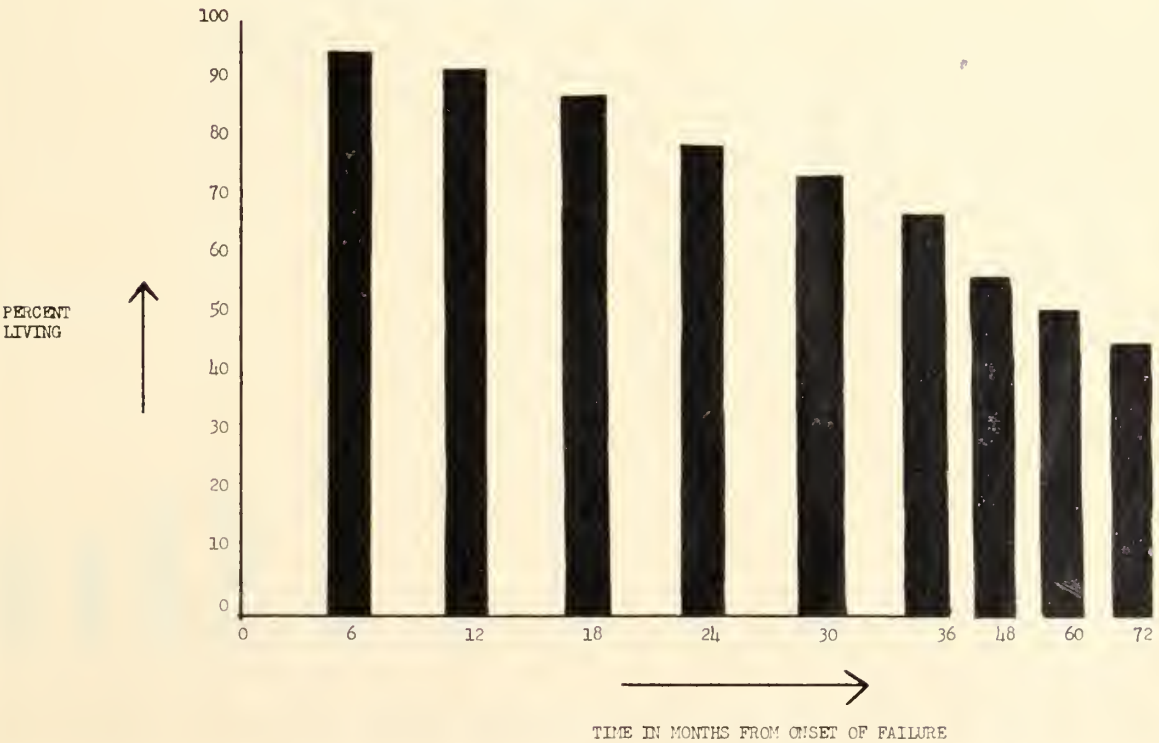


CHART 4
HYPERTENSIVE AND ARTERIOSCLEROTIC HEART DISEASE



tensive heart disease—47%, hypertensive and arteriosclerotic heart disease—16%, arteriosclerotic heart disease—28%, and rheumatic heart disease—6%.

In chart 2 one sees the average age at the onset of congestive failure in each of the major classifications. They are: hypertensive heart disease—58 years, hypertensive and arteriosclerotic heart disease—63 years, arteriosclerotic heart disease—70 years, and rheumatic heart disease—37 years. It is of interest to compare the average age of onset of failure in this group with those reported by Dr. Paul White of Boston in 1941. In Dr. White's series the average age at onset of failure was as follows: (1) hypertensive—52 years, (2) hypertensive and coronary disease—62 years, (3) coronary disease—65 years, and (4) rheumatic disease—36 years.

The remaining charts show graphically what percentage of patients in each major classification is living in terms of months after the onset of failure.

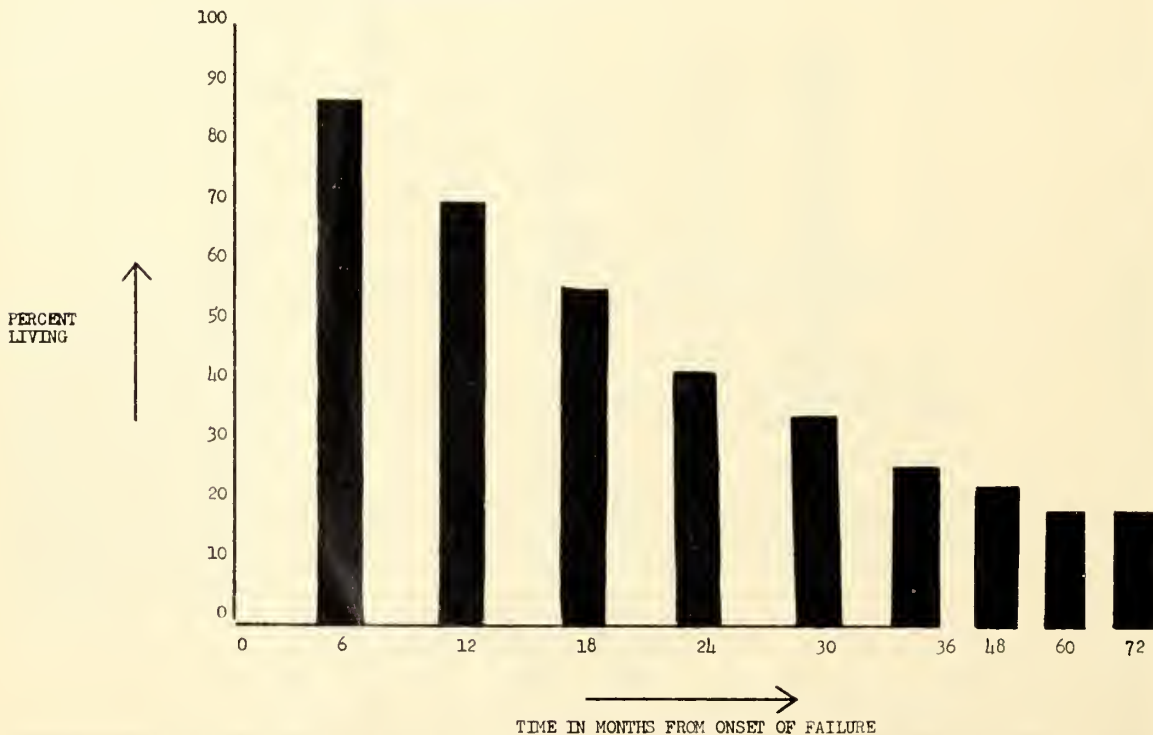
In chart 3 one sees the hypertensive group whose long range prognosis is quite good. There is only a gradual decline in the percentage living and 81% are still alive at

the end of six years from onset of failure. Of those patients who died there was an average of thirty-three months from the onset of failure to time of death. Those patients still alive have been under treatment for congestive failure for an average of fifty-six months and the longest one of this group for a period of one-hundred-twenty months.

Chart 4 illustrates the hypertensive group who, electrocardiographically, show not only evidence of ventricular hypertrophy but arteriosclerotic changes as well. You will note that the rate of death is considerably accelerated when compared with the former group, and at the end of six years there are only 47% still surviving. In this group the average length of time from onset of failure to time of death was twenty-nine months. However, those patients still alive have been under treatment for an average of fifty-four months since onset of failure.

Chart 5 illustrates very dramatically the grave outlook for a patient with arteriosclerotic heart disease who develops heart failure. One sees in this chart a rapid decline in the percentage living so that at the end of thirty-six months only 25% are still

CHART 5
ARTERIOSCLEROTIC HEART DISEASE



alive and at the end of five years only 19%. The average length of time in this group from onset of failure to time of death was nineteen months. However, those individ-

uals who do survive seem remarkably rugged. Of those living the average length of time under treatment for congestive failure averages fifty-nine months.

CHART 6
RHEUMATIC HEART DISEASE

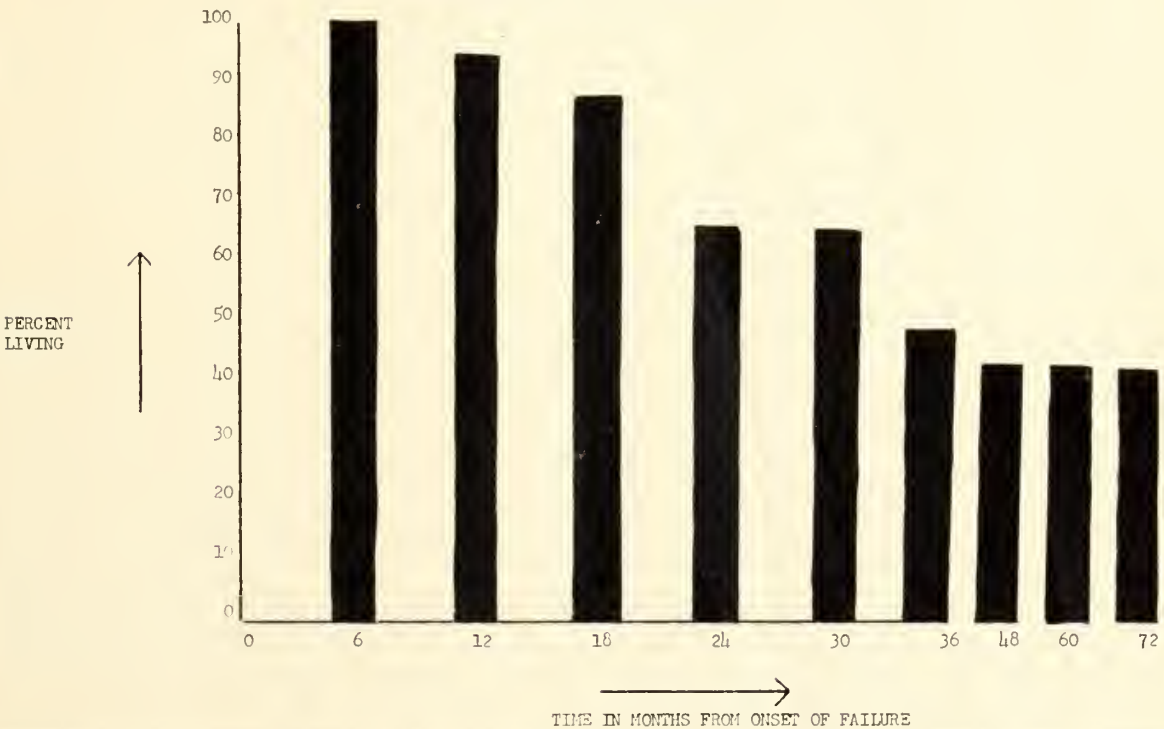


CHART 7

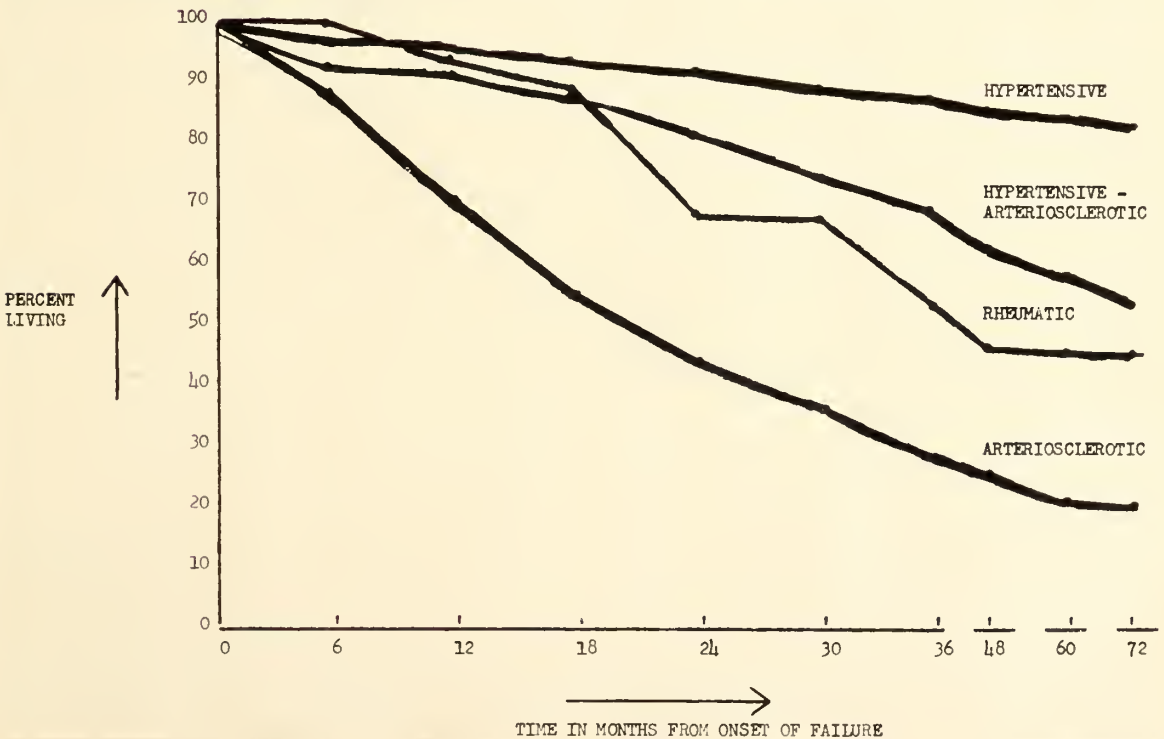


Chart 6 is that of rheumatic heart disease in which one sees no mortality for the first few months after onset of failure and then a fairly rapid decline to only 49% living at the end of thirty-six months. The stabilized figures for the fourth, fifth, and sixth years were the result of improvement following mitral commissurotomy in three of these cases. This group is composed of only seventeen patients and has little statistical value.

Chart 7 is a composite graph of the preceding four charts illustrating again the poor prognosis in those cases which show marked arteriosclerotic changes.

It has been said that, for the most part, management of the patient with congestive failure is an exercise in symptomatic therapy. Nevertheless, it is gratifying to see many of these patients survive for long periods of time in relatively good condition with careful control of congestive failure.

We know that it is foolish to attempt prognosis in any individual case because of a surprising response in many instances. However, a few points were outstanding in this study. We feel that the hypertensive with little arteriosclerotic change has a relatively good outlook. In our experience the most valuable prognostic guide has been the initial response of the patient to treatment. In those cases whose failure clears rapidly with treatment and is easily controlled one may expect a much better long term prognosis than for the patient whose return to a state of compensation involves drastic salt restriction, prolonged bed rest, and frequent use of parenteral diuretics. The factors precipitating failure seem to give some indication of cardiac reserve. The prognosis is worse for an individual who develops failure because of a simple upper respiratory infection than in one who breaks compensation only after some severe body stress.

In conclusion, although the majority of persons who have congestive heart failure eventually die of a recurrence of the condition or of some complication of the underlying heart disease, the treatment of myocardial decompensation should not be a matter of pessimism. Optimistic and persevering management according to the principles now well established will restore many patients to a useful and self-supporting state for long periods of time and will contribute

greatly to the comfort of the less fortunate ones who cannot be helped beyond the life of semi-invalidism.

Surgeons Evaluate Results of 120 Heart Operations—Two Denver surgeons say they believe that most if not all future heart operations could be performed with superior results while the patient is "frozen."

They based their observation on the results of 120 operations they have performed for various types of heart defects. All the operations were done while the patient was under hypothermia—in which the body temperature is lowered to a point where life continues but all bodily functions, including heart beat and blood flow, are greatly slowed.

Hypothermia allows surgery to be performed on an open heart with a "dry field" and direct vision, long the goal of cardiac surgery, according to Drs. Henry Swan and S. Gilbert Blount, Jr.

The results are better when the heart is open and can be seen by the surgeon than in the current blind methods guided only by the sense of feel, they said in the Nov. 3 Journal of the American Medical Association. In addition, direct vision of the heart allows the surgeon to see—and treat—unexpected defects.

As they performed each operation, the surgeons learned what types of defects can now be treated successfully, as well as some of the limitations of hypothermia. They found that eight minutes is the maximum time during which the blood flow through the heart can safely be stopped. Earlier they believed 10 minutes to be the maximum.

They also found that the safest temperature is between 29 and 32 degrees C (84.2 and 89.2 degrees F). Avoidance of lower temperatures largely eliminates two major complications: abnormal heart beating or failure, and disturbances in blood clotting. Use of fresh blood for transfusions also eliminates clotting difficulties, they said. Of the last 30 patients undergoing surgery only one has died.

The authors found that some defects cannot be repaired within the eight-minute limit. However, they had excellent results with certain narrowings of the entries where arteries lead into the heart, and with defects in the walls between the upper chambers of the heart. The risk of repairing these defects is low, they said.

They pointed out that the probability of the heart safely withstanding surgery can be largely predicted. Except for cases in which the patient's condition prohibits any surgery, the doctors said they will continue to offer operation to desperately ill patients even though everyone involved realizes that the risk is considerable.

The satisfactory results of their operations call for a broader adaptation of open heart techniques to other types of heart defects which at present cannot be repaired within the time limit, the doctors said. They feel that with further experience many of these procedures can be adapted for use with hypothermia. Then the risk to the patient will be as low or lower and better results can be achieved than with the current blind methods.

SOME ASPECTS OF BILIARY TRACT SURGERY

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and

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INTRODUCTION

This discussion is not intended to even begin to cover the many facets of biliary tract surgery but merely to describe briefly a few aspects of this broad and fascinating subject. Many aspects of biliary surgery are still controversial, but we feel that certain points are beginning to crystallize.

ACUTE CHOLECYSTITIS

In the words of Dr. Evarts Graham,¹ "The swing of the pendulum backward and forward is an interesting phenomenon in medicine." There is probably no other field in surgery where this has been more true than in the treatment of acute cholecystitis. Only two decades ago conservatism was the watchword. However, soon after that time operative intervention had the same connotation in this disease as in acute appendicitis. Gradually the practice of allowing a few hours of supportive therapy prior to surgical intervention has evolved. In a recent publication by Doubilet, Reed, and Mulholland² conservative therapy is urged in almost all cases of acute cholecystitis. But, since all patients with acute cholecystitis cannot wait until the gallbladder is quiescent for surgical intervention, we believe a middle-of-the-road policy, so to speak, may be followed.

Immediate surgery often appears ill advised because a majority of the patients are in an age group in which any type of surgery is particularly hazardous, due to frequent cardiovascular, renal, pulmonary, and hepatic disorders. Too, it is well known that, occasionally, it may be very difficult to differentiate acute cholecystitis from myocardial infarction, or acute pancreatitis. There is danger, of course, that either of the latter may terminate fatally if surgery is done. In addition, acute cholecystitis is, at least initially, a chemical inflammation. The pathologic features are those of edema, hyperemia, and hemorrhage. Not until the

third or fourth day does bacterial invasion occur and polymorphonuclear neutrophilic leucocytes begin to appear in appreciable numbers. This is the stage in which complications of rupture, with bile peritonitis, pericholecystic abscess, subphrenic abscess, and gallstone ileus, are most likely to obtain. An intensive medical regimen may prevent this stage in many instances. As soon as the patient is admitted for treatment, a Levine tube should be inserted and continuous nasogastric suction instituted. In order that the gastrointestinal, biliary, and pancreatic systems may have complete rest, nothing should be allowed by mouth. Anticholinergics should be given in adequate dosage to diminish biliary, pancreatic, and gastric secretions, and to prevent certain undesirable cardiac reflexes mediated via the vagus nerves. Barbiturates should be supplied in liberal amounts for adequate sedation and Demerol may be given for pain. Morphine should be avoided because of its well known spastic action on the sphincter of Oddi. To prevent the infective phase, if possible, antibiotics should be administered in full dosage.

On the other hand, we do not believe that every patient with acute cholecystitis can be safely treated without surgery, though an intensive conservative program is followed. Even the best therapy does not always prevent the complications mentioned above. Fortunately, however, we have fairly reliable signs which, in many instances, will signify impending complications. These are increasing fever, a higher white blood cell count, more pronounced pain, and an appearance of, or increasing size of, a right upper quadrant mass. If these occur, immediate surgery is mandatory. Usually, however, before these symptoms appear, enough time has elapsed for the patient to be in somewhat better condition to tolerate the surgical procedure. Although cholecystectomy is the definitive procedure, we should be reminded that unless the anatomy of the biliary tree can be sufficiently identified to prevent common duct injury or serious bleeding, cholecystostomy is the preferred procedure. This has been life-

1. Graham, E.: Editor's note. Yearbook of General Surgery, Chicago, 382, Series 1955-1956.

2. Doubilet, H.; Reed, G., and Mulholland, J. H.: Delayed operative management of acute cholecystitis, J. A. M. A. 155: 1570, 1954.

saving on many occasions, and can be accomplished under local anesthesia if need be.

CHRONIC CHOLECYSTITIS

Chronic cholecystitis requires only brief comment. More than 90% of these patients will also have cholelithiasis. Everyone is agreed that a patient with gallstones, complaining of recurrent colic and other symptoms of a chronically diseased gallbladder, should have elective cholecystectomy. But, the challenging question is how to treat the middle-aged woman with silent stones? This subject is ably discussed by Inglefinger,³ and his policy appears to be a good one. He describes two ways of handling the problem. First, one may do nothing. If this path is followed, there is a 50% chance that later the patient will develop symptoms that require cholecystectomy. Further, because of the risk of serious complications—surgical fatality, and carcinoma of the gallbladder, the chances are that the silent stone will eventually cause death in 6% of the cases. The second mode of handling this situation is immediate cholecystectomy. If this choice is made, there is a 1% chance of surgical mortality and a .5% risk of common duct stricture. With only a superficial examination of this situation, the answer seems obvious. Since there is a 4 to 1 mortality risk if the gallbladder is not removed, many physicians recommend immediate cholecystectomy. But this does not give an all-dimensional picture. The 1.5% risk is an immediate one and threatens a woman in the prime of life. The 6% risk is not incurred, as a rule, until the woman is in the sixth or seventh decade when many other disorders also threaten the patient's life. With these considerations in mind, it seems reasonable to check the patient with silent stones frequently and to insist on surgery at the first indication of symptoms referable to the biliary tract. Obviously, this is recommended only for the intelligent patient who can be closely watched and with whom the problem can be thoroughly discussed.

BILIARY SURGERY AND HEART DISEASE

An association between gallbladder disease and heart disease was noted as early

as 1878 by Guneau de Mussy.⁴ Reisman,⁵ in 1907, reported two patients who developed murmurs and cardiac dilatation in the presence of gallstone colic. Two years later, Babcock⁶ called attention to cardiac symptoms ranging from arrhythmias and precordial oppression without dyspnea to dilatation and incompetence. He further pointed out that judicious surgery, properly performed, was attended with less danger than "the doctrine of non-interference." In 1913, Tennant and Zimmerman⁷ noted at autopsies that gallbladder and cardiac diseases were jointly present in many patients. Actually, the first fundamental data concerning gallbladder disease and heart disease were published in 1935 by Fitz-Hugh and Wolferth.⁸ They pointed out the difficulties often encountered in differentiating the two diseases. They also presented electrocardiographic data taken before and after operation on a group of patients, all of whom had cardiac symptoms, primarily of the anginal type; and they observed a reversal of abnormal findings following surgery. Gilbert⁹ and his associates suggested that gallbladder or bile duct distention reduced coronary blood flow. Wechsler, Kaplan, Bellet, and Nemir¹⁰ attempted to produce electrocardiographic changes in dogs by distending different portions of the biliary tree. They succeeded only after they had previously produced some abnor-

4. Mussy, Henry Guneau de.: Quoted by Revillout. *Gaz. des Hop.*, p. 666, 1878.

5. Reisman, D.: Development of cardiac murmurs during attacks of biliary colic, *J. A. M. A.* 48: 1589, 1907.

6. Babcock, R. H.: Chronic cholecystitis as a cause of myocardial incompetence, *J. A. M. A.* 52: 1904, 1909.

7. Tennant, R., Jr., and Zimmerman, H. M.: Association between disease in the gallbladder and in the heart as evidenced at autopsy, *Yale J. Biol. & Med.* 3: 495, 1931.

8. Fitz-Hugh, T., Jr., and Wolferth, C. C.: Cardiac improvement following gallbladder surgery, *Ann. Surg.* 101: 478, 1935.

9. Gilbert, N. C.: Influence of extrinsic factors on the coronary flow and clinical course of heart disease. *Bull. New York Acad. Med.* 18: 83, 1942.

10. Wechsler, R. L.; Bellet, S.; Kaplan, A. K., and Nemir, P., Jr.: Electrocardiographic changes following biliary and gastric distention in freshly infarcted unanesthetized dogs, *Surgical Forum; Clinical Congress of the Am. Coll. Surg.* 5: 131, 1954 (1955).

3. Inglefinger, F. J.: Principles of Internal Medicine, ed. by T. R. Harrison, et al. 2nd edition, New York, The Blakiston Co., Inc., 1954, p. 1619.

malinity of coronary blood flow. In 1952,¹¹ Cullen and Reese with the aid of radioactive Na^{24} finally showed, without question, that coronary blood flow could be reduced by rapid distention of the common bile duct if the vagus nerves were intact.

Only three years later, Ravdin, Fitz-Hugh, Wolferth, Barbieri, and Ravdin¹² pointed out the relationship of gallstone disease and angina pectoris; and, also, that arrhythmias and other electrocardiogram abnormalities reverted to normal following surgery. They further reviewed 2,000 consecutive biliary tract operations performed between 1922 and 1947. Two-hundred and sixty of these patients had cardiac disease, and the overall mortality of this group was 3.8%. In the break-down by periods, they further showed a marked trend toward reduction in mortality in recent years. From 1922 to 1936, out of the 43 cardiac patients studied, the mortality rate was 16.2%; from 1927 to 1944, 3 deaths occurred, with a mortality rate of 2.7%; from 1944 to 1947, out of 106 patients no deaths were reported.

In their study of 100 patients with diseases of the biliary tract and coronary heart disease, Keys, Dry, Walters, and Gage¹³ reported a mortality rate of 3%, indicating that coronary heart disease patients tolerate surgery well. They reported a 71% five-year survival of these patients as compared to an 84% five-year survival of "run of the mill" patients of similar age and sex. Thus they concluded that removal of the gallbladder did not directly influence the course of coronary heart disease. However, this conclusion conflicts with the ideas of most writers on this subject and may well be invalid. It would be interesting to observe the five-year survival of a similar group of patients with coronary heart disease; and even more interesting, to study a control group of heart patients with diseased gallbladders, recording only the mortality in

the group of those who died from heart disease, not from gallbladder complications.

Recently McLemore and Levine¹⁴ stated that the removal of a diseased gallbladder improved the cardiac status in selected cases of complete heart block with Adams-Stokes syncopal attacks.

Obviously, cholecystectomy is a relatively safe procedure in patients with heart disease. Moreover, by removing certain noxious reflexes, it may aid myocardial function considerably.

INTRAVENOUS CHOLANGIOGRAPHY AS RELATED TO BILIARY TRACT SURGERY

We have long needed a method for the safe and adequate evaluation of the patient, who, following cholecystectomy, returns with recurrent symptoms referable to the biliary system. A great step toward this end was made in 1953 with the introduction in Germany of intravenous cholangiography using sodium iodipamide (Biligradin).¹⁵ This substance was introduced in the United States under the name of Cholografin in a 20% solution, which is identical to the original Biligradin. We are now using a 52% solution and feel that better results are being obtained. A new impetus to the study of the pathologic physiology of the biliary tree is being realized, especially in the study of the postcholecystectomy syndrome.

Wise and O'Brien¹⁶ have recently reported an excellent study of some 300 patients. This concerned the interpretation of the intravenous cholangiogram, using Cholografin in a 20% solution. Adequate visualization was possible in 85% of the patients studied. Of the 191 patients who had had previous cholecystectomy, approximately 83% were visualized. Liver disease constituted the main reason for failure to obtain visualization. This article explained that poor results may be expected in those patients who have a serum bilirubin value above 4 mg. or

11. Cullen, M. L., and Reese, H. L.: Myocardial circulatory changes measured by clearance of Na^{24} —effect of common duct distention on myocardial circulation, *J. Appl. Physiol.* 5: 281, 1952.

12. Ravdin, I. S.; Fitz-Hugh, T.; Wolferth, C. C.; Barbieri, E. A., and Ravdin, R. G.: Relation of gallstone disease to angina pectoris, *A. M. A. Arch. Surg.* 70: 333, 1955.

13. Keys, J. R.; Dry, T. J.; Walters, W., and Gage, R. P.: Cholecystectomy in patients with coronary heart disease, *Proc. Staff Meet., Mayo Clin.* 30: 587, 1955.

14. McLemore, G. A., Jr., and Levine, S. A.: Possible therapeutic value of cholecystectomy in Adams-Stokes disease, *Am. J. M. Sc.* 229: 386, 1955.

15. Gobel, E., and Teschendorf, W.: Darstellung der Gallenwege mit Biliografia (Schering) unblutige cholangiographie, *Röntgen Blätter* 6: 162, 1953.

16. Wise, R. E., and O'Brien, R. G.: Interpretation of the intravenous cholangiogram, *J. A. M. A.* 160: 819, 1956.

whose bromsulphalein retention is above 40%.

Although we have been taught that following cholecystectomy there is some compensatory dilatation of the common duct, this is not true in all cases. There is considerable variation in the size of the postcholecystectomy common duct, ranging from no dilatation to twice the normal size. We have seen some instances in which a stone has been demonstrated in the postcholecystectomy common duct without dilatation; others will be dilated to as much as 30 mm. Wise and O'Brien showed that any duct dilated to a diameter of 15 mm. or more is always, at least, partially obstructed; those measuring 8 mm. or less are definitely not. The group between 8 and 15 mm. are the difficult ones to evaluate; and unfortunately, most patients studied will fall into this category.

A new aspect of intravenous cholangiography introduced by Wise and O'Brien¹⁶ was that of the time density relationship. They showed that if a diagnosis of partial obstruction of the common duct is made, the density of the dye in the duct at 120 minutes should be essentially the same as the density at 60 minutes. This statement is true only when the gallbladder has been removed, or cystic duct obstruction is present. If the gallbladder be present and visualized with Cholografin, the ducts usually remain opacified for periods of much longer than two hours. With cystic duct obstruction, however, the common duct behaves in the same fashion as if it were a postcholecystectomy duct.

The demonstration of common duct stones with this method is accurate in only 50% of the cases according to the study of Wise and O'Brien.¹⁶ Our batting average has been considerably better. Possibly the increased concentration of dye that we are now using is responsible to some extent for this. However, the real value of this technique is to demonstrate whether or not partial obstruction exists.

Unfortunately, common bile duct strictures are somewhat difficult to determine by this method, because the patients are in poor liver repair at the time the study is made. However a goodly number have been determined.

The study explains that the dye may enter the duodenum readily, although there may be a partial obstruction of the

duct. It is also interesting to observe that Wise and O'Brien show that none of the laboratory procedures will predict an accurate level above or below which one may safely predict or exclude partial obstruction.

It has been shown that the morphology of the biliary ducts is important in determining whether obstruction or partial obstruction is present. The obstructed duct is likely to be more tortuous; and the hepatic radicals, if visualized, may appear to be blunted or like broken sticks. Since strictures may be located at the level of the cystic duct or even higher, and calculi may be lodged at any level in the duct, an apparent shortening of the duct should suggest obstruction.

This study should not be substituted for oral cholecystography for obvious reasons; but, it should probably be done prior to surgery in a patient with a gallbladder that fails to visualize with the oral dye. Of 34 patients studied by Wise and O'Brien¹⁶ who failed to visualize by the oral method, 12 gave good visualization of the gallbladder with Cholografin. In 22 of the 34 cases visualization of the ducts was good. Twelve of these patients were operated upon and 10 showed obstruction of the cystic duct, which would, of course, eliminate filling of the gallbladder. Operations had not been performed on the remaining 10 at the time of the report. We have had excellent results in demonstrating cystic duct and gallbladder remnants with this study and consider it of immense diagnostic value in this respect.

One or two sources of error in intravenous cholangiography should be pointed out. The first is that a pyelogram is always obtained. This is usually visualized in about ten minutes and should not be confusing as long as one is aware of its occurrence. Secondly, one must be very careful not to interpret dye, which has entered the duodenal bulb or gastric antrum, as representing a gallbladder. Moreover, in doing cholecystography, there is considerable layering which takes place as the gallbladder is filled with dye. It becomes readily apparent that, if a film is interpreted when the stones are in a portion of the bile which does not contain dye, they would go undetected. Then too, the layering effect itself may give the appearance of stones.

Therefore the examination must not be considered complete until homogenous opacification is complete. Upright and decubitus films aid in this respect.

We feel that intravenous cholangiography is a relatively safe procedure; we have had no reactions to date. It is our practice to give 40-50 mgm. of Benadryl intravenously just before the dye is injected. We believe, too, that more widespread use and further knowledge of this examination will lead to a more accurate evaluation of the post-cholecystectomy syndrome. By using it, many of these patients will be removed from a functional classification to a classification of organic disease; and some may well be cured by definitive surgical attack.

NEEDLE ASPIRATION OF THE GALLBLADDER

Perhaps many surgeons are utilizing this simple aid in gallbladder surgery. We have not seen it referred to in the literature, however, and we feel that it would be worth while to mention it.

Patients having elective surgery have usually been without food since the evening meal of the preceding day. The gallbladder has had no cause to empty itself, nor the sphincter of Oddi to relax. For this reason, many times when the abdomen is opened the gallbladder will be found to be full, distended, and tense. Its walls are not easily collapsed nor is the organ readily emptied by palpable pressure. Because of this, examination of its contents is inadequate. Small stones and occasionally calculi of considerable size may be overlooked.

The technique of needle aspiration of the gallbladder is a simple and very effective means of obviating the above difficulty. A No. 18 gauge needle fitted to a large syringe is all that is required. We have used a 20 cc. syringe for ease of handling. A warm saline pack is placed beneath the gallbladder and either the surgeon or the assistant elevates the gallbladder into the wound and the other aspirates its liquid contents through the fundus. Usually after approximately 40-60 cc. are removed, the organ is sufficiently collapsed to afford excellent palpation. The puncture wound made by the needle is closed and inverted with a purse-string of triple 0 intestinal catgut. Drainage is not required unless further biliary surgery is done.

Obviously this procedure is not necessary

when elective cholecystectomy is being done for cholelithiasis previously diagnosed by cholecystography. We feel it is most useful for routine examination of the gallbladder; when either laparotomy is being done for some other purpose, and gallbladder examination is inadequate by the usual technique; or, when one must resort to exploratory laparotomy for persistent biliary symptoms after repeated cholecystography is negative.

Doctors Asked to Lead in Highway Safety—

Two American Medical Association publications have challenged physicians to be more than just doctors to injured motorists—to become leaders in the whole field of road safety.

An editorial and article in the Oct. 27 A. M. A. Journal and a guest editorial in the October A. M. A. Archives of Internal Medicine outlined the role of physicians in the fight against a "disease" that is killing persons at the rate of one every 14 minutes and injuring someone every 25 seconds in the U. S.

Success in meeting the problem of ever-increasing injury and death on the highways will require the cooperation of "the best minds in medicine, highway engineering, and car design," the Journal editorial said.

Physicians may be the logical leaders in a coordinated movement because of their biological science background and their intimate knowledge of crash effects and problems of human behavior that might figure in smashups, the Journal article quoted Dr. Fletcher D. Woodward, Charlottesville, Va., as saying. He is chairman of the A. M. A.'s new committee on medical aspects of automobile injuries and deaths.

In fact, the more some physicians look into traffic safety the more they seem to see the possibility of a new medical specialty, which one general practitioner has suggested be called "medicotrafficology," the article said.

Dr. Jacob Kulowski, St. Joseph, Mo., said in the Archives that all branches of medicine and surgery must cooperate in both the treatment and prevention of auto accident injuries. Physicians who have observed the seriousness of some auto injuries should turn their attention to accident prevention through better medical standards of driver licensing and the maintenance of driver fitness. They should take a more active interest in medicolegal problems resulting from accidents, he said.

The Journal editorial pointed out that doctors can help reduce accidents by approving and supporting necessary research and by furnishing information to automotive designers on injuries, survivals, and deaths.

Physicians have a responsibility to prevent injury to individual patients, the editorial said. They must warn persons not to drive after taking drugs with a sedative effect, and that conditions such as severe pain or itching, while not direct accident hazards, can produce disturbances that may divert a driver's attention.

FEMALE UROLOGY IN GENERAL PRACTICE

MAURICE E. BARRETT, M. D.

Decatur, Alabama

Most of the patients who confront the busy general practitioner today are women.

It is difficult, if not impossible, to give each separate case adequate time and attention. However, many of the problems confronting these women will not be solved until someone takes a complete history, performs a thorough physical examination, and obtains basic laboratory studies. Most of the urologic problems can be diagnosed with a little time and with the facilities usually at hand. The extent to which any individual doctor may go in diagnostic tests and various forms of therapy will depend upon his training, experience and skill. By an occasional review of the literature and up-to-date texts on urology, he will at least be able to recognize his own limitations, carry the examinations forward, and refer to the specialist those cases that are not promptly diagnosed and adequately treated. It is essential that any patient who has recurring episodes of urinary tract symptoms, or who has unexplained blood or pus in the urine, should have a thorough urologic workup which will include cystoscopic examinations, x-ray studies, cultures, chemistries and such other tests as are indicated.

The role of foci of infection in producing recurring urinary tract pathology must never be disregarded. Acute pyelonephritis following acute tonsillitis, respiratory or gastrointestinal infections is familiar to all. Less commonly recognized is the role of the infected cervix in producing urinary tract pathology which remains incurable until the cervix is treated or removed. Do not forget the woman who has had radium or x-ray for carcinoma of the pelvic organs. About thirty five per cent will develop strictures of the ureters and hydronephrosis, and many will have radiation cystitis.

The urethra is the site of pathologic changes more frequently than any other portion of the female urinary tract. Eversion of the urethral mucosa may be acute as following a hard labor, straining at stool, tenesmus, or passing a pedunculated polyp, and may produce acute symptoms. However, it is usually a gradual process and

causes no symptoms until painless bleeding is noted. It is usually recognized as a dark red cylindrical or oval projection which generally surrounds the entire meatus. If only partial, it is usually located posteriorly. Treatment includes clearing of infection, removal of causes of straining, then such definitive treatment as circumstances indicate.

Urethral caruncles are thought to be one of the sequelae of long standing urinary infection. They are bright red in color and usually located at the posterior margin of the meatus. They may be multiple. They may be sessile and fixed or pedunculated and movable. They are very sensitive to touch and cause dyspareunia, postcoital bleeding and dysuria. They may or may not be malignant. Schloss¹ points out that they can occur in the posterior urethra and bladder neck, and five of his forty eight cases were malignant. Those situated posteriorly should be removed with a resectoscope and submitted to a pathologist. Those presenting at the meatus can be removed under a local anesthetic, preferably using sharp dissection, followed by postoperative dilatations.

Strictures of the urethra frequently are unrecognized until severe damage has been done to the upper urinary tract. The congenital cases should be diagnosed in infancy and corrected by dilatation. Failure to do so leads to urethritis, cystitis, pyelonephritis, hydronephrosis and all of its implications. Acquired strictures usually result from much the same causes of urethritis. Cervicitis and vaginitis are predisposing causes. Trauma from childbirth and trauma and infection from repeated catheterizations definitely play a part. While many patients remain asymptomatic for long periods of time, they eventually give a history of gradual decrease in size and projection of the stream, and dysuria. After chronic urethritis and periurethritis develop, pain may be present locally, in the suprapubic region, along the course of the ureters, in the back, or within any tissue within two feet of the urethra. In all cases of postpartum reten-

Read before the Association in annual session, Birmingham, April 19, 1956.

1. Caruncle of the Posterior Urethra and Bladder Neck. Walter A. Schloss, M. D., Hartford Conn. J. Urol. 71: 316-326, 1954.

tion and repeated catheterization, prophylactic dilatation up to a 28 or 32 French sound, with instillation of 2% silver nitrate, will prevent many cases from developing stricture. This should be done at the four to six week checkup and again in three months. Cases already well developed require dilatations at seven to ten day intervals. This should be done very gently so as not to produce a tear, with its resulting scar tissue and later contraction. If the stricture is dense, one may not be able to progress to the next size sound for three or four weekly treatments. If considerable urethritis exists, 0.5% silver nitrate should be instilled following the first dilatation, gradually increasing the strength of the solution to 1% and finally 2% as the urethritis subsides.

Diverticulum of the urethra is diagnosed with increasing frequency as physicians become aware of its existence. The patients complain of frequency, dysuria, and pain, which may be suprapubic, in one or both sides of the pelvis, in the medial portion of the thighs, in the lumbar or sacral spine, or along the course of the ureters. On separating the labia, if the diverticulum is filled, it will be seen as a fluid-filled pouch of varying size in the urethrovaginal septum. If it is empty it may require urethroscopic examination or urethrography for its demonstration. It is thought to arise as a result of the necrosis and rupture into the urethra of a periurethral abscess. Since the periurethral glands are usually located only in the anterior third of the urethra, the diverticulum is usually just inside the introitus. However, it may be quite large and may extend back beyond the base of the bladder, especially when it occurs in late pregnancy. If the opening into the diverticulum is small, retention of foul smelling urine and pus causes inflammatory reactions and exacerbations of pain. If the opening is large, the patient complains of frequent dribbling of urine and pus, or more or less constant drainage. If neglected, the patient continues to have pain and disability, and in some cases a calculus will form and may produce acute retention of urine. Treatment should begin by expressing the contents by digital compression, obtaining sensitivity determinations of the infecting organism, reducing the infection by administration of the appropriate medication, emptying the sac and

instilling appropriate agents in some cases, and then excision of the diverticulum after it has been outlined by urethrography or instillation of a dye to outline the sac.

Infection of Skene's glands is a frequent source of dysuria, frequency and dyspareunia. Pressure on the glands through the anterior vaginal wall causes pus to extrude from the excretory ducts which are located from 4 to 7 mm. postero-lateral to the urethral meatus. Many different forms of treatment have been advocated, none of which are uniformly satisfactory. If properly done, electrocoagulation with a fine needle may produce a cure. Sensitivity studies on the organisms causing the infection permit selection of suitable agents for instillation. In the past few years I have had fairly good results by instilling Furacin solution into the glands through a rounded needle.

Urethritis, if acute, is usually diagnosed by even a cursory examination. Chronic urethritis, however, can be easily overlooked, and, as a result, many women are being subjected to needless surgery. Many cases of chronic urethritis today are the result of acute urethritis during infancy or childhood. The condition was either untreated or inadequately treated at the time, and the patient, who is now mature, has a urethra that is sclerosed, very firm, extremely tender on palpation, and on urethroscopic examination is found to be edematous, red, bleeds easily, may be quite granular, and in later stages polypoid in appearance. It is estimated that, in addition to the local pain, 96% have suprapubic pain, and 60% have pain which may be referred to any structure in the lower abdomen and pelvis, lumbosacral spine or upper thighs. The pain is at times unilateral, and these are the cases in which needless surgery is so frequently done. Do not forget that the routine urinalysis may be entirely normal. Do not forget to inspect and palpate the urethra and bladder neck. Any woman who has unexplained abdominal pain, who has a firm or tender urethra, should be considered as a case of urethritis until proven otherwise. If pus can be expressed, sensitivity studies and cultures should be obtained if possible. If acute or subacute infection is present, hot sitz baths, sedatives, antispasmodics and urinary antiseptics should be used. In other cases, urethroscopic examination should be done by all

means. If polypi are present, they should be fulgurated. If caruncles are present in the posterior urethra or bladder neck, a resectoscope should be used and the tissue submitted to a pathologist. Many cases of granular urethritis can be cleared by repeated dilatation of the urethra, and instillation of 2% silver nitrate at weekly intervals. In recent years, the use of Furacin urethral suppositories has been an adjunct in obtaining more prompt relief of pain and apparent cure. For any treatment to be satisfactory, infection in the cervix, vagina and upper urinary tract must be eradicated.

Cystitis, while frequently found, is rarely a primary condition. Bladder tumors do occur and should by all means be diagnosed and treated early. Traumatic injuries and childbirth may give anticipated symptoms. Stasis, stones and infection require search for underlying causes with their correction. Hunner's ulcer or interstitial cystitis is a problem for the urologist.

Obstruction of the bladder neck,² if allowed to remain untreated, may cause hydronephrosis and eventual uremia. The symptoms are similar to those of urethral stricture, but the one cardinal sign is constant residual urine. It may be caused by either intrinsic lesions, such as diseases of the central nervous system or congenital malformations, or by such extrinsic causes as tumors, calculus, ureterocele, cystocele, foreign body or tumors of adjacent tissue. In very early cases, dilatation up to a 32 to 35 French sound, repeated periodically, may give relief. In advanced cases, resection of the bladder neck through a resectoscope by a skilled urologist is imperative.

The small irritable bladder, so frequently found in nervous and high strung patients, causes frequency but usually no other symptoms. Complete urologic survey must rule out Hunner's ulcer and may reveal nothing more than decreased bladder capacity. These patients can be helped by such drugs as Miltown, Equanil, phenobarbital or other sedative preparations, and by anticholinergic drugs. Detar, Graham and Corey³ re-

port that by the use of Banthine the bladder capacity may be increased from 200 to 500 cc. Repeated dilatation of the bladder with hydrostatic pressure is the treatment if all others fail.

Renal pathology may exist in many forms; it may be mild with severe symptoms, or it may be severe with few or no symptoms. The patient's life may depend upon an accurate diagnosis and proper treatment. Wilhelmi⁴ has made an urgent plea for complete urologic workup on any patient who shows unexplained red or white blood cells in the urine. He reported 5 cases who were free of all symptoms but probably would have gone to a fatal termination. The presence of microscopic blood in the urine was the only finding on routine examination which pointed to urinary tract pathology.

Idiopathic nephralgia is a syndrome recently described by Stirling⁵ which will undoubtedly prove controversial. It may well be illustrated by the following case. A highly intelligent but emotionally unstable professional woman began having episodes of pain medial to the right femoral triangle, accompanied by a sense of fulness and soreness in the right lumbar region. The episodes of pain would at times require hospitalization for relief. On two occasions she was sent to prominent teaching hospitals where exhaustive studies were made by all the various services, including psychiatric evaluation. The cause of the pain was not determined. Later, during an episode of acute pain, a size 7 ureteral catheter was passed up the right ureter. At 12 cm. above the ureteral orifice, there appeared to be a slight constriction and the patient stated that the pain in the right thigh was much more severe. The catheter was advanced to the renal pelvis and 20 cc. of sterile urine escaped as a continuous flow, instantly relieving the pain. During the next few weeks, dilatations were performed at weekly intervals up to a size 13 ureteral catheter. The patient returned when she felt a slight recurrence of pain at progressively increasing intervals, the last treatment having been at a seven month interval.

Stirling points out that the condition is

2. Female Vesical Neck Obstruction. Charles Pierre Mathe, M. D., *J. Internat. Coll. Surg.* 21: 146-159, 1954.

3. Banthine as a Urologic Drug: A Clinical and Electromyographic Study. John H. Detar, M. D.; Sam D. Graham, M. D., and Edward L. Corey, M. D., *Univ. of Va., Charlottesville, J. Urol.* 72: 45-50, 1954.

4. Asymptomatic Urological Disease. Otto J. Wilhelmi, M. D., *South. M. J.* 48: 949-954, 1955.

5. Pain in the Upper Urinary Tract, W. Calhoun Stirling, M. D., Washington, D. C., *M. Ann., District of Columbia*, 24: 123-126, 1955.

produced by an imbalance of the autonomic nervous system, and symptoms may include emotional instability, pylorospasm, anorexia, regurgitation, flatulence, precordial pain, dyspnea and headache. About the only physical finding is tenderness along the course of the ureter on the affected side. Local overactivity of the sympathetic nervous system leads to irregular and incomplete contractions of the calyces and renal pelvis, resulting in delayed emptying, overdistention and colic. Rarely does the delayed emptying produce sufficient dilatation to be recognized on the pyelogram. Dilatation of the ureter with bougies or catheters first reproduces the exact pain the patient has felt, then produces paralysis of the sympathetic nerve endings in the ureteral wall, thus breaking the reflex arc and relieving the pain. Whether or not Stirling's concept will be accepted remains to be seen. Organic stricture of the ureter tends to give more or less continuous pain, whereas these patients have episodes following a period of stress or strain. Spastic ureteritis gives a somewhat different syndrome. During the past few years I have had some criticism by colleagues for dilatation of the ureters on these cases when no pathology could be demonstrated, and I could offer no logical explanation except that the patient's pain was relieved.

Medical treatment of urinary tract infections may be very simple, or extremely complex. Marquardt and Pick⁶ state: "The findings of bacteria completely resistant, the development of mutations during treatment, and the increasing incidence of serious reactions, particularly to the antibiotics, offer serious concern for the future." They prefer to start their patients on mandelic acid and an acid-ash diet, pending the receipt of reports on cultures and sensitivity studies. Cook,⁷ of the Mayo Clinic, prefers as initial treatment the sulfonamides, such as Gantrisin, Sulamyd, Elkosin or Thiosulfil. They are quick in action, relatively non-toxic, effective against most of the gram negative bacilli and most of the gram positive cocci except *Streptococcus faecalis*, and can be used in either alkaline or acid

urine. Urosulfin has recently been made available, and from preliminary reports it may be the sulfa drug of choice in acute or painful conditions. Sulfonamides should not be used unless kidney function is good. Dodson and Hill⁸ and many others have reported that Furadantin is effective against most of the urinary tract pathogens, resistant strains have not developed in vitro, and the drug does not affect the fecal bacterial count, and consequently there is no overgrowth of the intestinal tract fungi. Antibiotics and the broad spectrum drugs are definitely of value, but one must keep in mind the possible toxic reactions and later complications. Penicillin should not be used until sensitivity studies have shown it the most effective preparation. Streptomycin should never be used until tuberculosis has been ruled out, and sensitivity studies indicate its use. Mandelamine, which is a mixture of mandelic acid and methenamine, and an acid-ash diet have proven satisfactory in some cases of chronic infection. Urologists are not agreed as to its value.

The general practitioner has a definite place in the diagnosis and treatment of female urologic problems. He should keep the various possibilities in mind in any case in which the cause of disease is obscure. He should recognize his abilities and his limitations and make prompt referral of all cases where indicated.

The ancient art and the burgeoning science of medicine know no national or racial distinctions. Medicine, like art and music, speaks with a human tongue, and its knowledge and techniques are dedicated to all mankind.—Ed., *World Med. J.*, May 1956.

It has often been pointed out that the mortality caused by tuberculosis, and by other microbial diseases as well, had begun to decrease before the campaigns based on the germ theory had been put into effect. The campaign against infection began with the great public health reforms. The early pioneers of the public health movement were little concerned with germs, but they knew that an effective way to combat consumption and other "infectious fevers" was to assure for each citizen good air, pure water, adequate food, and pleasant and happy surroundings, both at work and at play.—Rene J. Dubos, Ph. D., *Nat. Tuberc. A. Tr.*, May 1954.

6. Treatment of Nonspecific Urinary Tract Infections. Charles R. Marquardt, M. D., and James W. Pick, M. D., *Med. Times* 83: 989-995, Oct. 1955.

7. Urinary Tract Infections. Edward N. Cook, M. D., *Mayo Clinic, Ann. Int. Med.* 43: 316-322, 1955.

8. The Use and Misuse of Antibiotics in the Treatment of Infections of the Urinary Tract. Austin I. Dodson, M. D., and J. Edward Hill, M. D., *Virginia M. Monthly*, Sept. 1955.

THE JOURNAL
of the
Medical Association of the State of Alabama

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17 Molton Building Montgomery, Ala.

Subscription Price \$3.00 Per Year

December 1956

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ADRENOCORTICAL RESPONSE TO CANCER
IN MAN

An understanding of chemical changes that cancer might produce in a patient's tissues and body secretions could be important in several ways in the battle to control cancer. It could lead the way to a test of susceptibility to cancer and provide a basis for a simple, accurate diagnostic test of the incipient stage or of the early stages prior to dissemination of the disease. It could also provide new clues in the search for therapeutic drugs for cancer.

One approach that suggested itself was to investigate the relationships between the adrenal glands and cancer. Changes in the excretion pattern of corticosteroids (adrenocortical hormones) have previously been observed in the presence of cancer of the adrenals, pituitary, prostate, and breast. The last two types are among the leading kinds of cancer in men and women, respectively. It is important to know whether the excretion pattern of these hormones also changes in the presence of cancers of other sites, particularly those not directly related to the endocrine glands.

To obtain such information, scientists in the National Cancer Institute have studied some newly discovered corticosteroids excreted in the urine of cancerous guinea pigs. The findings are reported by Drs. Eli M. Nadel and Shlomo Burstein, of the Laboratory of Pathology, in a paper, "Urinary Excretion of Corticosteroids in Guinea Pigs with Malignant Diseases," which appeared in August issue of the Journal of the National Cancer Institute.

Two types of cancer, leukemia and liposarcoma, were transplanted into the guinea pigs in this study. In the leukemic animals, excretion of the three corticosteroids studied increased steadily during the course of the disease. In the animals with liposarcoma, excretion of the same three steroids remained about normal in the early stages of the disease but in the terminal stages it equalled that observed in the late stages of leukemia. The more rapid response in leukemia may be associated with the more acute character of this disease, which causes earlier death than liposarcoma. It may also be related to the infiltration of leukemia cells observed in the brain and adrenal glands, in contrast to the absence of such metastases in the animals with liposarcoma.

The fact that two of the three urinary corticosteroids have also been isolated from the urine of man suggests to the authors some similarity between the mechanisms of synthesis of these substances in the two species and a hope "that the results of the present study may have a bearing on the problem of adrenocortical response to cancer in man."

MISSION OF THE HOSPITAL OF TOMORROW

The mission of the "hospital of tomorrow" will be to "maintain" bodies to prevent damage as well as to "repair" bodies that have already been damaged, Theodore G. Klumpp, M. D., told the 1956 meeting of the American Hospital Association.

Hospitals are meeting the vastly-expanded medical care needs of the public, declared Dr. Klumpp, president of Winthrop Laboratories, pharmaceutical manufacturer. But their task is becoming increasingly difficult due to the tremendous population rate growth and the greater number of chronically ill people. He called for substantially greater financial help from the public, industry and the Federal Government, coordinated with "more efficient use of our professional and technical personnel."

Urging hospital administrators and medical men to lead the way, he stressed the need for hospitals with vastly broadened services.

"Many hospitals have added, or are adding, rehabilitation services, which is a major advance. But the hospital is still only a repair shop where broken bodies are sent to be mended. Some day it will also be a maintenance shop where the most intricate mechanism in the world will be sent to find out how it can better be cared for to prevent damage."

Dr. Klumpp cited a number of existing conditions which demand a "different pattern of medical care." He listed these as: the extraordinary rate of growth of our population; the rapidly increasing proportion of older people; a shift in the center of gravity of illness away from acute illness and toward chronic illness; growing emphasis on rehabilitation; and changing public attitudes toward medical care and hospitalization.

Noting that the population increase is now about three million persons annually,

he said the U. S. can expect a population of 238 million by 1980.

"Our older persons are increasing in numbers at a ratio greater than the increase in the total population. Projecting this increase to 1980, we may look forward to some 70 million persons who will be 45 years and over, of which 25 million will be 65 years or older.

"In other words, we will have more people over 45 years of age than the total number employed at the present time."

Today, Dr. Klumpp continued, the U. S. Public Health Service and the Commission on Chronic Illness estimate 28 million people to be chronically ill from physical or mental diseases.

"Of these, approximately 5.3 million have been disabled over three months, with 1.1 million in long-term hospitals and institutions and 4.2 million living at home."

Discussing the general hospital of tomorrow, Dr. Klumpp visualized provision for total, integrated health services. As recommended by the Commission on Chronic Illness, of which he is a member, services would include out-patient health maintenance clinics, diagnostic facilities, bed-care for long-term illness, rehabilitation services, home care and visiting nurse service. Additionally, there would be close relationships with other community agencies designed to restore the individual to the highest level of economic and social usefulness.

Such a hospital, the AHA was told, could be either a single or multi-unit institution. But to function at maximum efficiency, it must be administered so as to facilitate shifting patients from one service to another with minimum delay and cost, Dr. Klumpp explained.

Imperative to an improved medical care program is an education campaign to stimulate the public to budget health costs more extensively through insurance. It is the best large-scale, voluntary solution to the problem of illness for the average family, he said.

At the same time, he stated, the public should be informed that costs of health care today are a "bargain." Over the past 20 years, only four per cent of personal disposable income has gone for medical care, including drugs. In 1954, the per capita consumption of drugs and sundries

was only ten dollars, compared with \$54 for alcoholic beverages, \$32 for tobacco products, and \$18 for car maintenance, Dr. Klumpp said.

BLOOD VELOCITY MEASUREMENTS

Public Health Service scientists have now devised a way of measuring, in animals, the velocity with which blood is ejected at a given instant from the heart into the aorta.

This advance, which will soon be applied to humans, may make it possible for scientists to calculate the power output of the heart and from this to judge the reserve power of the hearts of both normal persons and heart patients.

This information will be of great value to physicians and surgeons in determining the physical abilities and limitations of heart patients and in judging the risks, for particular patients, of stressful experiences such as surgical operations.

The new technique, which measures blood velocity in the aorta itself, is known as "a catheter tip method for the measurement of instantaneous aortic blood velocity." It was developed in recent months by Dr. Donald L. Fry, Mr. Alexander J. Mallos, and Mr. Alfred G. Casper, of the Clinic of General Medicine and Experimental Therapeutics of the Public Health Service's National Heart Institute of the National Institutes of Health at Bethesda, Maryland.

The velocity measurements are obtained by threading a slender flexible plastic tube through a small cut in a leg artery. The catheter is double, consisting of two hollow tubes fused side by side. Openings in the side of the catheter are placed so that one of the tubes measures blood pressure about two inches downstream from the other.

The difference in pressure between these two openings is converted by a special "differential pressure gauge" to variations in electrical current which move the arm of a pen and ink recorder to produce a permanent record of the pressure difference.

The researchers have deduced a mathematical formula for calculating the instantaneous aortic blood velocity from this pressure difference.

The output of the heart can be calculated by multiplying the blood velocity by the cross sectional area of the part of the aorta in which the measurements are taken.

The researchers have verified the method experimentally in dogs and in models designed to simulate the pulsating flow of blood from the heart.

Although these tests show the method to be reasonably accurate and safe in dogs, the researchers feel that further refinements are necessary before its application to human beings.

They are now concerned with developing an electric computer to perform the time consuming computations so that the velocity will be recorded on a strip chart instantaneously, and with the design of a more accurate system for sensing the aortic pressures from which blood velocity is computed.

RAUWOLFIA-EPHEDRINE AS A HYPOTENSIVE-TRANQUILIZER

In the June 2, 1956 issue of the Journal of the American Medical Association, Drs. T. M. and H. M. Feinblatt and E. A. Ferguson, Jr. review the history of rauwolfia and reserpine and emphasize their usefulness, not only in hypertension but also in anxiety, tension, stress and nervous disturbances.

They report on a series of 68 patients treated with rauwolfia preparations, 20 of whom developed untoward side effects. Among these were nasal congestion, excessive drowsiness, overeating, alarming nightmares, irrational behavior, and an incapacitating degree of agitated depression.

In all cases it was found possible to continue the use of rauwolfia preparations by adding ephedrine. A dosage recommended is 8 mg. of ephedrine with 0.1 to 0.25 mg. of reserpine, the combination being given three times daily—in the early morning, near noon and at 4 p. m. The ephedrine in this dosage did not interfere with the hypotensive action of the reserpine, and did relieve the side effects.

Three cases are described in detail. (1) A woman 20 years of age with nasal congestion and excessive drowsiness, (2) a 63-year-old man who had nightmares and developed a confused depression, and (3) a 65-year-old man with severe side effects: hunger, increased peristalsis, weight gain, nightmares and confused depression. In each case, treatment with the ephedrine-rauwolfia alkaloid combinations gave complete relief and a continued favorable therapeutic response. The authors point out that the blood-pressure-lowering effect of the

rauwolfia alkaloid is in no way impaired by its combination with ephedrine.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twentieth annual meeting of The New Orleans Graduate Medical Assembly will be held March 11, 12, 13 and 14, 1957, headquarters at the Municipal Auditorium.

Eighteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty-four informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, scientific exhibits, medical motion pictures, round-table luncheons and technical exhibits.

The Assembly has planned another interesting postclinical tour to follow the 1957 meeting in New Orleans. On Saturday, March 16, a party composed of doctors and their families will leave from New York for the Mediterranean and Europe via plane. The itinerary includes France, Greece, Turkey, Egypt, Jerusalem, Lebanon, Syria and Italy. Arrangements have been made for medical programs in the places visited. The official tour terminates in Rome on

Friday, April 12, but arrangements may be made for independent travel to any points in Europe desired, with return to the United States by air or steamer.

Details of the New Orleans meeting and the postclinical tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, Louisiana.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examinations (Part I), written, for all candidates will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, February 1, 1957, at 2:00 P. M.

Candidates must submit case reports to the office of the Secretary within thirty days of being notified of their eligibility to Part I. The cases must be prepared in the manner described in the Bulletin of the Board with a duplicate index list.

Requests for reexamination in Part II must be received prior to February 1, 1957.

Current Bulletins outlining present requirements may be obtained by writing to Robert L. Faulkner, M. D., Secretary, 2105 Adelbert Road, Cleveland, Ohio.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

MEDICAL MALPRACTICE—A CHANGING PICTURE!

By R. Crawford Morris

Throughout the United States and England medical malpractice lawsuits are alarmingly on the increase. So are the sizes of the verdicts rendered therein.

Newsweek reports:

"Some 5000 cases are now being tried each year with thousands of other cases settled out of court. Since 1950, one out of every 35 doctors insured under the New York State Medical Society's group-insurance plan has been sued in the courts for malpractice."

The chairman of the District of Columbia Medical Society Professional Liability Insurance Committee (where recently 115

malpractice cases were pending and the doctors found all group insurance withdrawn from them) states:

"Only about one in seven or eight of the district cases shows any real negligence on the doctor's part. Nonetheless, the doctor loses about one in four cases'."

England's experience is the same: "The flood of claims against doctors, which has been steadily rising during the past few years, shows no sign of subsiding. In fact, in the year under review, the number of such claims has again shown an increase . . ."

Verdicts are even more alarming. In a very recent case, a San Francisco jury returned a malpractice verdict in the sum of \$250,000. A few months before, a San Diego jury returned a malpractice verdict in the

sum of \$210,000. A Tennessee jury returned a malpractice verdict of \$200,000; a federal jury, one of \$123,000; a Texas jury, one over \$100,000; and a Wisconsin jury, one of \$97,000.

In fact, the medical malpractice picture is changing so catastrophically that one wonders if the law itself is changing:

"The increase in the number of actions against hospitals and doctors has given rise to the feeling in some quarters that the law of negligence, insofar as it affects doctors, has undergone a drastic change."

We submit, and earnestly hope, that it has not and that our courts will continue to adhere to those safeguards of the law requiring legal proof of negligence by expert testimony in medical malpractice cases. The rationale of recent cases, however, alarms us and commands our serious attention.

CALIFORNIA DECISION

This case arose out of the following circumstances: The plaintiff, a 54-year-old man employed as a stock clerk, had suffered intermittent claudication in the calves of both legs for about a year. He had been attended by a specialist in internal medicine who treated him conservatively with drugs intended to improve circulation. When the patient did not respond, he was referred by the internist to the defendant doctor, a specialist in vascular surgery. The defendant doctor examined the patient and found complete absence of pulsation from the femorals down. The patient had all the other signs of an obstruction in his aorta and the defendant doctor recommended that he enter the defendant hospital for further studies to determine if an operation could be performed to improve the patient's condition. The plaintiff claims he understood he was entering the hospital merely for some routine X-rays. Up to this point, the patient had no sensory or motor nerve disturbances.

The patient entered the hospital on January 5, 1954. He was examined by a resident in surgery and X-rays of the chest and abdomen were taken with barium swallow. The next day, the patient was scheduled for translumbar aortography, but this was postponed until the afternoon of January 8, 1954. The patient was taken at that time to the X-ray department. The defendant doctor was present at the very start of the procedure, but did not participate in it. He left

the room after a minute or two. The patient was given an anaesthetic by an anaesthetist. A resident in surgery inserted a 16-gauge needle into the aorta in the usual manner without difficulty. Thirty cubic centimeters of sodium urikon were injected through the needle, and a series of films was taken. Upon examination of these, with the patient still under anaesthesia, the resident in surgery, after conferring with the radiologist, decided that an additional run should be made in an attempt to visualize collateral circulation lower down on the body. An additional 20 cubic centimeters were injected without changing the position of the needle. The patient was returned to his room, apparently in good condition. The next morning about 5:00 a. m. it was found that the patient was completely paralyzed from the umbilicus down. He had a transverse myelitis which unquestionably was permanent in nature. Complete paralysis of the lower extremities, bowels and bladder was present. The patient was a permanent paraplegic.

The plaintiff's first complaints at the trial were that the defendant doctor himself did not perform the procedure as the patient had expected, but that it was done by an allegedly inexperienced resident. (In fact, the resident had considerable experience, but this was difficult to establish.) The patient complained that he was not advised in advance of the procedure that there were any attendant risks or dangers. He claimed that 50 cubic centimeters of sodium urikon was too much and exceeded the recommended dosage of the manufacturer's brochure—15 cubic centimeters. He also complained of two runs being taken.

At the trial it was difficult to establish what in fact caused the paralysis, as there is very little in the literature concerning such a complication, although a few have been reported. It was the defendant doctor's opinion, and that of another expert, that there had been an occlusion of the blood supply to the spinal cord which resulted in necrosis of the cord. The third expert, a neurosurgeon, was of the opinion that the complication was due to a toxic reaction to the drug.

At the trial it was demonstrated that the patient would require paraplegic care for the remainder of his life. Plaintiff's expert testified that he had a normal life expectancy of about 20 years. This, of course, was

contrary to the findings demonstrated by the aortogram, which showed an almost complete block of the aorta very close to the take off of the renal arteries.

There was no direct testimony that standard practice was not followed either by the hospital and its employees or by the defendant doctor. An independent medical expert called on behalf of the plaintiff to testify was not permitted to express an opinion on the standard practice in the community in the performance of aortography, on the ground that he was not qualified in the field.

The trial court denied defendants' motions for a non-suit and directed verdict on the theory that the doctrine of *res ipsa loquitur* was applicable and submitted the case to the jury on this doctrine. The court did not require proof of negligence by the plaintiff. In applying the doctrine of *res ipsa loquitur* to the case, the trial court instructed the jury that there was a presumption or inference of negligence from the untoward result which it was incumbent upon the defendants to explain away. The trial court's instructions, in effect, made the attending physician responsible for practices with untoward results, even though he was not in attendance at the time.

The jury rendered a verdict in favor of plaintiff against both defendants in the sum of \$250,000. This was reduced by the trial court to approximately \$215,000 and the case is now on appeal by both defendants.

At the Medicolegal Symposium of the American Medical Association in New York City on October 30, 1955, it was reported by the late Louis J. Regan, M. D., LL. B., of Los Angeles, that the doctor involved in this case has, because of the decision, contemplated resigning from the practice of medicine altogether, feeling that he could not properly practice his specialty without the diagnostic aid of aortography, which aid the court's decision had taken from him by requiring him to be an insurer of its application notwithstanding unforeseeable complications—an insurance too costly for the doctor at a jury premium of \$250,000. Dr. Regan stated that the defendant doctor had performed 50 such aortograms with no untoward results.

The action of the trial court in applying the doctrine of *res ipsa loquitur* to this situation and thus permitting the plaintiff to

submit his case to the jury without medical proof of negligence in the application of the aortography does, in fact, place upon the defendant doctor the burden of becoming an insurer of a vitally needed but delicate diagnostic aid where an unfavorable complication may, of course, occasionally occur even in the presence of the highest degree of care.

One has to sympathize with the defendant doctor! The risk, at \$250,000, is too great a one for him to be asked to assume. If this is to become the law, it is apparent that the patient and the progress of medical science—not the doctor—are to be the losers. Under the pressure of such odds, doctors will simply cease to employ such techniques regardless of their benefit to the patient and regardless of the fact that, statistically, serious complications are rare.

In a discussion of this case, a leading Cleveland orthopedic surgeon, Wallace S. Duncan, stated that the medical profession is already retrenching along this line, foregoing many useful techniques for fear of court and jury imposing tort liability without fault through the doctrine of *res ipsa loquitur* and that malpractice litigation is now considered by the medical profession as an occupational hazard so great as to even adversely affect current medical school enrollment.

OHIO DECISION

In this case plaintiff fell off a farm wagon in 1944 and struck the back of his head, neck and shoulders on the wagon tongue and on the ground. No serious consequences appeared at the time, but about a year later sporadic headaches set in, which had become constant and unbearable by October, 1948. After consulting a doctor in the city where he lived, plaintiff on November 30, 1948, came to an Ohio hospital for examination and treatment, being placed under the care of the defendant, Dr. A. After two days of conservative treatment, which proved ineffectual, Dr. A. performed a spinal column operation on December 3. At this operation Dr. A. was assisted by Dr. B who, in Dr. A's absence, had charge of plaintiff from that time on. He examined him at various times and made notations in the hospital record. The operation was a cervical laminectomy and posterior rhizotomy. The laminectomy consisted of the removal of the spinous processes of the first four cervical vertebrae to give access to the spin-

al canal. The rhizotomy consisted of the division or cutting of certain sensory spinal nerve roots which transmit pain to the brain.

Plaintiff's recovery from this operation was uneventful. He was discharged from the hospital on December 13, and he returned to his home under instructions to get up for a few minutes each day. However, on December 25 his headaches returned and a week later, on December 31, he came back to the hospital for further observation and treatment. On January 1, 1949, Dr. B, in the course of making his regular round of visits, came to plaintiff's bed and, after questioning him as to what had happened while he was at home, asked him if he would sit up, first in bed, then on the edge of the bed, which he did. Dr. B then asked him to turn his head from side to side, but plaintiff complained that this movement caused him pain, whereupon Dr. B, remarking that he could surely turn his head more than three fourths of an inch, put his hands on the sides of plaintiff's head and turned it from side to side 12 or 15 times, this being in spite of plaintiff's protests and resistance.

Dr. B then said, "I want to see his reaction on his feet," and so the doctor helped him on with his slippers and robe, walking backward ahead of plaintiff and cupping his hands in plaintiff's hands and, when plaintiff still continued to resist, said, "You just don't seem to want to get well!" In this fashion Dr. B got plaintiff out into the hall and they walked down the hall some 30 feet. Dr. B then took his patient over next to the wall saying, "I want you to walk. You keep trying to walk." Thereupon, plaintiff claims, Dr. B left him, and his wife and another woman had to lead plaintiff back to his room and to bed.

The hospital records contained the following note by Dr. B relative to this:

"The patient has not been out of bed since he left the hospital. Neurological essentially negative except for surgical analgesia as noted. History obtained from wife revealed patient had a very good friend operated on in Indianapolis, Indiana, and died a few hours postoperative; since then patient has continually cited severity of his operation. States he has pain in the analgesic area but yet unable to feel a pin. He resents close questioning into his condition and states he cannot walk. I urged him to get out of bed

and he exhibited a pseudoataxia and then became quite angry because he had to get out of bed; the nurse observed him while I answered a phone call and he told her he was going to get out of here because we could not understand his condition. With that remark the ataxia disappeared and he ambled over to his bed. Impression: Conversion hysteria."

The foregoing occurrence furnished the entire basis of plaintiff's \$128,000 suit for malpractice against Drs. A and B.

In his argument to the jury, counsel for plaintiff frankly stated:

"I should like to state it now once and for all and without the slightest equivocation, the essence of our case is assault and battery . . .

". . . , defense counsel, says we have not proved negligence. We have not attempted to prove negligence. We do not take the position that this is a negligence case. Whatever malpractice was committed here we insist was a malpractice by reason of doing a completely unauthorized act, not a negligent act. An unauthorized act."

Plaintiff's contentions were: (1) Dr. B's treatment of his patient, the plaintiff, on the occasion in question was not consented to by the plaintiff, but on the contrary was opposed and resisted by him; hence, it was unauthorized and in law amounted to an assault and battery. (2) Consequently, there having been a willful assault by Dr. B, medical evidence was unnecessary and the nature of the occurrence was such that lay testimony was sufficient for a jury of laymen to find Dr. B. guilty of malpractice.

Defendant's contentions were: (1) By voluntarily becoming a patient at the hospital, plaintiff gave his consent not only to the operation performed on him but also to any and all postoperative treatment which the hospital doctors, including Dr. B, in good faith deemed necessary for his recovery; for this reason, Dr. B's treatment on the occasion in question was not unauthorized nor did it amount to an assault and battery; it had been consented to in advance and his consent lasted as long as he remained a patient at the hospital. (2) Except in rare cases, malpractice must be established by medical evidence and not by lay testimony, and while there exists an exception that under certain circumstances lay testimony is sufficient, the case at bar

falls within the rule and not within the exception.

The trial court directed a verdict in favor of both defendants. However, the court of appeals reversed the judgment of the trial court as to defendant, Dr. B, stating:

"... it is the unanimous opinion of the members of this court that plaintiff's evidence discloses a course of conduct upon this occasion by defendant (Dr. B) constituting a technical assault and battery upon plaintiff, a very sick and weak man, with resulting injuries.

"It is the contention of defendant's counsel that the patient, by entering the hospital and submitting to treatment, gave implied consent to anything which might occur, such as the conduct here considered. This rule has no application to the facts and circumstances as indicated by the evidence presented by plaintiff in the instant case, where the patient and his wife protested vigorously against the conduct of the assistant physician and begged him to wait for consultation with the doctor in charge of the case. In the absence of evidence to the contrary, the vigorous but unavailing protests of plaintiff and his wife constituted an express refutation taking precedence over any implications arising from the fact that he was a patient of the hospital. Further, it is our view that the question of consent, either expressed or implied, under the circumstances was a question of fact for the jury under proper instructions.

In our opinion upon plaintiff's evidence, the treatment accorded the plaintiff upon this occasion by the assistant physician was unauthorized and unjustified... thus bringing the case within the exception to the general rule that expert medical testimony is necessary to support a case against a physician for negligence."

In its opinion in favor of Dr. B, the trial court had said:

"But here is a doctor who has to find out just how much flexibility he has, whether he actually can stand or not, or whether he can walk or not and so he moves the man's neck around a little, after he applies some pins to see how much numbness there may be there or somewhere else..."

"And so he tries to help the gentleman to move his head a little, and he didn't like it and he protested and he hollered.

"Well I suppose that his head had stayed still in the three weeks that he had been home, except once a day he probably got up, maybe those muscles were kind of becoming atrophied and deadened and lifeless and numb, I don't know.

"... Can I say as layman that his present condition and everything he has gone through was caused directly by and would not have happened except for what (Dr. B) did on this day?

"Now that is exactly what is expected of these 12 jurors as laymen, to say without medical help or without medical testimony, from their own knowledge and experience, —and the average of them would not have any more than I would have, I don't believe —to say from the light of their experience, not only is this man's present condition the result of what the doctor did, but had the doctor never done that, he would have been all right?..."

"Now then, suppose that your little child is sick with constipation, and you say, 'Willie, step up here and get a dose of Castor Oil.'

"Willie says, 'I don't want it.' And you say, 'You got to take it.' So you hold his nose and give him a tablespoon of Castor Oil and Willie screams. Is that assault and battery?..."

"But whenever anybody has to start walking, after having had a broken leg, or has to start moving anything after having been in a cast—if any of you had had the experience, you thank the Lord that you have ultimately had a healing, and we don't all have healings, do we, gentlemen? But you know as a layman that the first day your boy or your neighbor's boy tries to get back on crutches, you have a tough time holding him up, and you know he has to fall a few times, and you know, he has to be pushed as you know when those muscles, ligaments and tendons first start being moved again, it requires a little push even though someone says, 'ouch.' Even though they cry and even though they protest.

"That is what is required of doctors. But I know that as a layman, and so does every man in this room. And when this young man tried to help this plaintiff, it wasn't any assault and battery, at all.

"There is an implied consent to the methods therein required to get him on his feet, and the doctor was of the impression that he

could turn himself into a self-made invalid if he didn't. . . .

"I am supposed to let this go to a jury of 12 laymen who will say, out of all the things that this fellow now has, the plaintiff, that this doctor who tried to help him on this occasion by moving his head and neck and get him to his feet, he is the cause of it all, he ought to pay for it all."

As was observed by the trial court, the practice of medicine is replete with instances of these alleged quasi-assaults. One has but to sit in a dentist's or doctor's waiting room or walk down a hospital corridor to hear the protestations of patients against the often painful but usually necessary treatment of the doctor attempting to help the patient beyond immediate pain to final recovery. If the natural reticence and understandable objections of the patient to every necessary but painful treatment administered by the doctor is to convert treatment properly deemed necessary by the attending physician into a technical assault and battery, actionable at law per se without regard to negligence, then the practice of medicine will have to be drastically curtailed. Yet this is what the decision of the court of appeals clearly implies. For it renders the doctor liable, without fault, for the technical assault thus "committed" and renders him an insurer of all subsequent events that lay jurors may decide they think resulted from such treatment. If this decision is to be the law, then the doctor will have to forego many vitally necessary treatments at the first painful outcry from the patient. If forced to by the law, the doctor can thus curtail his practice. But, once again, it will be the patient, not the doctor, who will bear the loss—for recovery from injury or disease is the patient's, not the doctor's. Surely our courts must learn to take a more realistic view of the "medical facts of life" if the progress of medical science is not to be seriously curtailed. Doctors are human and in the face of such risks as these (that is, the liability without fault of an insurer for all untoward and unforeseeable results which may happen to develop after such a technical "assault") will quite naturally tend to forego vitally needed procedures at the first outcry from the patient. Patients, too, are human and quite naturally react to painful treatment with protestations, although they are truly desirous of ultimate recovery from their ail-

ments. We submit that our courts must make a more realistic appraisal of this situation and require medical proof of negligent treatment if the ultimate interest of the general public is to be served and medical science advanced.

FLORIDA DECISION

In this case suit was brought alleging malpractice in these respects: (1) that the treatment given was not proper (it was alleged that in the vicinity radium, X-ray and surgery were the approved methods of treating such malignancy); (2) that the treatment given should have been discontinued and another adopted after it showed no favorable results; and (3) that the defendant abandoned the plaintiff.

The trial court submitted the case to the jury which returned a verdict of \$65,000 in favor of plaintiff, on which verdict judgment was rendered. On appeal, the supreme court in a five-to-two decision reversed the judgment, holding that that defendant doctor was entitled to judgment as a matter of law. On rehearing, the supreme court in a four-to-three decision affirmed the judgment of \$65,000 in favor of plaintiff. Further rehearing was denied on June 3, 1955.

Comment: Detailed discussion of the various problems presented by this case will be the subject of T. J. Blackwell's article which will appear in the July issue of THE INSURANCE LAW JOURNAL.

CONCLUSION

We have devoted this article to a discussion of only three cases because we feel an urgency to "sound the alarm" to focus attention on this changing malpractice picture. Inroads are being made upon the sound principles of the law protecting the medical profession from the evils of jury speculation and resultant liability without fault; pressure groups are exerting influence upon courts and legislatures alike to relax and abolish these safeguards of the law. The time has come for those of us to whom the legal rights and defenses of the medical profession have been entrusted to exert an organized and effective pressure upon both courts and legislatures in defense of the rule requiring proof of negligence by expert testimony in malpractice cases. (The rule is being defended. The supreme courts of California and Tennessee have both refused to apply the doctrine of *res ipsa loquitur* to unfortunate results following

the use of electric shock therapy.) In a very real sense, we who conduct malpractice defenses are defenders not only of the medical profession but also custodians of the rights of the public for, if this trend continues, it is the public, as potential patients and beneficiaries of the advancement of medical science, that will suffer. The medical profession cannot be asked to underwrite the cost of the advancement of medical science at the risk of personal financial ruin. As an English court has said:

"We should be doing a disservice to the community if we imposed liability on hospitals and doctors for everything that happens to go wrong. Doctors would be led to think more of their own safety than of the good of their patients. Initiative would be stifled and confidence shaken. A proper sense of proportion requires us to have regard to the conditions in which hospitals and doctors work. We must insist on due care for the patient, but we must not condemn as negligence that which is only misadventure . . ."

It is easy to accuse; it is difficult to defend. The safeguard of the law that "he who affirms must prove" and, in malpractice cases, "must prove actual negligence by expert testimony," is sound and should be preserved. To do otherwise is to force the medical profession into the role of insurers, a burden which it cannot and will not bear, with the resultant loss of useful techniques and retardation of the progress of medical science. Ultimately, this loss will fall upon the patient himself—who sooner or later may be any one of us.

1. The court decisions can be found in Volume 198, Federal Reporter, Second Series, page 273, and Volume 207, Federal Reporter, Second Series, page 567.

2. 21 U. S. C. 375 (b) This authority has been delegated to the Commissioner of Food and Drugs by the Secretary of Health, Education, and Welfare, 20 Federal Register 1998.

The author is a member of the firm of Arter, Hadden, Wykoff & Van Duzer, Cleveland, Ohio. His article is reprinted, with permission, from the January 1956 issue of the Insurance Counsel Journal, which is published by the International Association of Insurance Counsel.

ALABAMA CHAPTER AMERICAN COLLEGE OF SURGEONS

The Alabama Chapter of the American College of Surgeons will hold its sixth scientific meeting at the Grand Hotel, Point Clear, January 18 and 19, registration beginning at 8:00 A. M., on the 18th. Registration fee of \$5.00 includes luncheon scheduled for 1:15 P. M., the 18th. In releasing the program, the President of the Chapter, Dr. Hugh Linder of Birmingham, called attention to the number of guest essayists, who, with physicians from Alabama, would contribute to the program. These guest speakers include Drs. John Weed and Jack Wickstrom of Tulane, Dr. John M. Howard of Emory, Dr. William W. L. Glenn of Yale, Dr. Robert S. Myers of Chicago, Dr. C. Marshall Lee of Cincinnati, and Dr. William Boyd of Toronto.

Alabama physicians contributing to the program will be Dr. John Donald of Mobile, Dr. Robert H. Mason of Hamilton, and Drs. S. Richardson Hill, Joseph A. Cunningham, Champ Lyons, and Buford Word of Birmingham.

AMA to Honor Young Scientists—The two high school students winning top AMA awards at the National Science Fair next spring will be invited to be guest exhibitors at the AMA's annual meeting June 3-7 in New York City. Dr. Alphonse McMahon, chairman of the Council on Scientific Assembly, will serve as chairman of the AMA judging committee at the Fair in Los Angeles May 9-11. The AMA awards—two "firsts" and two "honorable mentions"—are in addition to those awarded by Fair officials, and are presented by AMA for the best exhibits in the basic medical sciences as an encouragement to scientifically-talented students to enter the study of medicine. This will be the second year of AMA participation.

Approximately 800 persons will attend the National Science Fair, featuring an expected 340 student exhibitors—two finalists from each of the 170 cooperating regional fairs. More than 250,000 high school students now are building exhibits for the 1957 preliminary fairs sponsored by community groups interested in the development of young scientists.

The National Science Fair has increased in size from 13 supporting regional fairs in 1950 to the 170 fairs expected to send finalists this spring. A considerable part of this growth is due to stepped-up activity by medical societies in sponsoring or aiding local fairs. The AMA House of Delegates noted this expanding participation and urged even greater support of science fairs by medical societies in a resolution adopted at the 1956 annual meeting. Information on organizing and operating a local high school science fair is available from Science Clubs of America, 1719 N Street, N. W., Washington, D. C.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

LET THE DOCTOR PRESCRIBE YOUR REDUCING DIET

Why does an individual wish to lose weight? He may give any number of reasons. Both men and women may wish to do so for esthetic reasons, for "looks." Another person may be concerned with ridding himself of excess poundage because of the lack of energy which frequently goes hand in hand with overweight. And still another individual may have heard that several other diseases or conditions are associated with overweight or obesity. Thus, he may wish to reduce his chances of developing these illnesses.

Many other reasons could be given, but perhaps these are enough to explain or set the stage for translating these wishes into action. A favorite way of doing something about obesity is dieting. Take a poll among your friends to see how many of them are on diets, and this may give you some idea of this method's popularity among others, as well.

Understandably, then, the diet is as well a favorite conversation topic. "What did you eat for breakfast?" "How many calories are you allowed at dinner?" "It is difficult to refuse a helping of chocolate pie." These are some of the statements that fly back and forth among those persons who are cutting down on food.

Undoubtedly, this added emphasis on the importance of the kind and amount of food consumed by the individual is desirable. The science of nutrition is making an ever-enlarging contribution to our health. And people are learning more and more about the body's specific food needs.

However, there are potential hazards in one particular kind of dieting. Harm may lie ahead for the so-called "self-styled" dieter, the person who decides to lose weight by dieting without ever once consulting a physician. The individual may have the very best intentions, but if he continues

such a course, a doctor writing in a recent issue of the *Journal of the American Medical Association* (for August 25, 1956) tells us that "harm can be anticipated that neither the resources of the publishers (of popular diet articles) nor the ingenuity of the research scientists can always correct."

You may be familiar with the typical "self-styled" dieter. Consistency is not one of his distinguishing characteristics. On the contrary, he may try one certain diet for a week or two, and then he may change suddenly to another. If he hears about a different kind of diet from one of his friends, or if he reads about it in a magazine, he "cannot wait" to give this diet the same trial he has given so many others.

Unfortunately, first of all, such a dieter may fail to achieve his avowed purpose of losing weight. But let us suppose that he does indeed lose weight. The next question is, has he maintained his health at the same time? For if he has not, the chances are good that he will not enjoy the thinner body which is free of much former weight, but which may have developed other illnesses in the meantime.

There is a very good reason why most individuals are not suitable judges of their dieting needs. To begin with, few persons, relatively speaking, know enough about the energy and other contents of foods to prescribe for themselves. Moreover, it is one thing to know what a food of a certain kind and amount contains before it is eaten, and still another matter to know what happens to this food, what changes take place in it, once it is inside the body. Health writers speak of "hidden fats." These fats are the ones which take that form only after they enter and begin to be used by the body. When such foods are served at the dinner table, they are not what is usually considered the fatty type of product.

Still another reason why the average person is a poor diet judge is that he is unprepared to evaluate his own state of health, except in a general way. This point can be illustrated by the title to a publication about one chronic disease: "You May Be Feeling 'Shipshape'—But You May Have

Diabetes." Thus, the individual who reads about a diet in a popular magazine may be cautioned in the same article not to undertake the regimen unless he is in good health. Such advice leaves the average person with a considerable burden, for again it should be emphasized that what appears to him to be good health may not be that at all. On the contrary, as we learned from the earlier quoted title, an individual may be feeling fine, but he may have diabetes, not to mention other diseases and conditions.

All this and more is why obesity or overweight is a medical problem. As such, it should be handled by the physician. His is the job of deciding whether weight reduction is necessary. Moreover, he will need to decide whether it is safe and, if so, what is the best way available to accomplish the reduction in weight.

The American Medical Association's Council on Foods and Nutrition reemphasized obesity as a medical problem in that *Journal* article we mentioned earlier. The Council, further, stressed that "Weight reduction may be harmful to health or even endanger life if undertaken without full understanding of the problem."

This was part of the Council's statement issued because of its concern over several misleading diet articles published in popular magazines recently. One of these features, for example, was based on an experiment with a liquid diet conducted in a New York hospital. However, the magazine's description of the diet differed from that given earlier in two medical journals. The magazine had included new menus, in addition to other deviations from the original diet as described. Still another magazine article about the same diet was accurate in its description of the diet, but neither article, the Council tells us, sufficiently stressed the reasons why individuals should consult physicians before adopting these diets.

Why would it be unwise, for the overweight person to follow the diet outlined in these articles? The American Medical Association's Council on Foods and Nutrition answers that question for us:

"The experimental character of such an abnormal diet makes it imperative for the physician to recommend its use only after careful investigation. . ."

What understanding of obesity does the doctor have that prepares him to be the best judge of the safety of a particular diet for a particular individual? First of all, he recognizes the obese person as the victim of a chronic disease, a disease which one doctor, in that same *Journal of the American Medical Association* issue we mentioned earlier, calls an incurable disease at the present time. Of course, this does not mean that nothing can be done for overweight. On the contrary, much can be done and is being done. It simply means that treatment must be continued over a long period of time. The overweight person, for example, cannot go on a diet for two months, say, then discontinue it, and take up old eating habits without expecting to gain some or all of his former weight.

Thus, while the "self-styled" dieter may think of a particular diet as a cure-all, the doctor knows that a diet of any kind cannot be claimed to solve the problem of obesity at the present time. Rather, diets are treatment for symptoms.

Moreover, the doctor knows that the fundamental universal cause of overweight is overeating, a disproportion between the amount of food eaten and the amount needed by the individual to maintain health. The report of a conference on obesity given in a recent issue of *New York Medicine* (for July 5, 1956) gives us some interesting information on the extra pounds too much food provides. One doctor who participated in that conference reported that only one extra butter ball a day, or its equivalent, more than the individual needs will mean that that person's weight will double in 20 years! Moreover, if there is an eight per cent difference between the person's intake and output each day, it will cause a gain of 17 pounds in a single year.

Beyond this fundamental overweight cause, however, the doctor knows that there are other important factors to be considered. There are psychological reasons which are believed to provoke overeating. Another doctor participating in that New York obesity conference we mentioned points out that many cases of overweight begin in that early period of life called puberty, or the early teen age. Further, he points to the importance of the convalescence after surgery for a child of this age. A parent, for example, may want the child to be inactive,

and the young patient may be fed a great amount of candy and ice cream.

The doctor knows, too, that the individual's appetite center is believed to be located in that part of the brain known as the hypothalamus. Moreover, some experiments in animals have been conducted where this brain part was injured, and the animals were found to develop heartier appetites than they had exhibited before. This research has led some doctors to speculate on the possibility that similar lesions of the person's brain appetite center may explain some cases of obesity. However, much more work needs to be done to come up with conclusive findings on this theory.

Is obesity a simple matter of relationship between height and weight? The doctor knows that the answer to this is "no," that other factors in addition to these are important and must be allowed for. The bodies of older people, for example, who are of the same height and weight as a group of young people, contain more fat than the latter.

The height and weight tables, of course, are considered by doctors as useful guides, but not the complete answer. Still another doctor who participated in that New York conference we have been referring to points out that a person who is 10 per cent overweight according to the tables is presumed to be obese. But he stresses that that is not always the case. To illustrate, he summarizes some studies on the specific gravity measurement in certain individuals. In this complicated procedure, the individual is weighed under water and the amount of residual air in the lungs is measured. The test arrives at the amount of fatty tissue in a person's body, in this way: the fat is so much lighter than the rest of the tissues that it reduces the specific gravity to such an extent that the fat man will float while the thin man will sink. In one of these studies, 23 professional football players were subjects. According to the standard weight and height tables, 17 of these men were so much overweight that they would have been rejected for life insurance or for military service. But when subjected to the complicated weighing-under-water test, the men's bodies were found to contain little fat. In fact, the specific gravity measurements for these athletes put them in the class with thin people!

There are many other things, too numerous to discuss at this time, that the doctor knows about obesity which are important to know in the treatment of this disease. In the interests of his health and well-being, the obese individual who wants to reduce his weight needs the doctor's help and understanding.

Survey Disproves That Athletes Die Young— Athletes live just as long and die of the same causes as do nonathletes, a Michigan State University survey has shown.

The effects of intensive athletic competition on the heart and other organs and on bodily resistance to disease have long been the subject of controversy and it was believed that athletic competition shortened life expectancy. Some studies have indicated that the life expectancy of former college athletes is greater than that of the general population, but shorter than that of college "intellectuals," while others have shown no difference.

The Michigan State study, reported in the Nov. 17 Journal of the American Medical Association, was set up because it was thought that a comparison of athletes to their classmates might give more valid information. It was undertaken as a pilot study of a larger national research project inaugurated in 1951 and sponsored by the physical education honorary fraternity, Phi Epsilon Kappa.

Questionnaires were sent to 1,130 athletic letter winners and 1,130 nonathletes who were individually matched as to years of attendance at Michigan State University and ranging in dates of birth from 1855 to 1919.

Of the questionnaires sent to athletes, 629 or 55.66 per cent were returned, while 583 or 51.59 per cent of those sent to nonathletes were returned. No significant differences in longevity and cause of death appeared between the groups.

The questionnaires showed that the average life expectancy of athletes was 65.96 years, while the average life expectancy of nonathletes was 65.97. Sixty-seven athletes had died, at an average age of 73.86 years, compared to 56 nonathletes at an average age of 74.24.

The distribution of causes of death, including cancer, central nervous system diseases, heart disease, and suicides or accidents, was approximately the same for the athletes and nonathletes in the study. It also agreed with figures on the general population, as reported by public health departments. Type of death—lingering or sudden—was also similar for the two groups.

In fact, the only significant differences in the two groups of men were that more former athletes had served in the armed forces, especially in the Navy and Marine Corps, more former athletes smoked and drank, and their weight in college was appreciably greater than that of the nonathletes.

Authors of the Journal report are: H. J. Montoye, Ph. D., W. D. Van Huss, Ph. D., Herbert Olson, M. S., Andrew Hudec, M. S. and Earl Mahoney, M. S. of the department of health, physical education and recreation at Michigan State University, East Lansing.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

January 1957

No. 7

THE CHRONIC TOXICITY OF SALT (SODIUM CHLORIDE)

THE 1956 JEROME COCHRAN LECTURE

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Sodium chloride (common table salt) is one of the oldest known but least understood of our essential nutrients. This paradoxical statement is rather startling but nevertheless easily documented. Knowledge of its first use is lost in antiquity. Much of its chemical nature and properties has been known for centuries and only the development of nuclear physics in recent years has added anything of importance to this aspect. Compared to it, such nutrients as thiamin and vitamin B₁₂ are the merest parvenus.

It is customary to describe and categorize nutrients by such characteristics as their requirement, their action, the effects of excessive intake and of their imbalance with related nutrients. Much is known of this in respect to vitamins, protein, calories and other nutrients. Much is known of this with respect to sodium chloride also but much is not known. For example, the quantitative requirement of sodium chloride for growth and maintenance of health in man and other animals has not been ascertained. Its action on certain tissues and cells is obscure and the harmful effects, if any, in moderate excess are uncertain. That these things remain unknown for such a well-known and common nutrient as salt is the basis of the paradox.

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These studies on experimental sodium chloride toxicity were supported in part by the Life Insurance Medical Research Fund G-54-24 and the National Institute of Health, Grant H-1816.

I have said that knowledge and use of salt goes back to antiquity. It is also true that as far back as these earliest times there were areas of the human world where salt was not used. The social, religious, economic, ethnic and political aspects of the use of salt are well recorded in history. Meneely has summarized them well in a recent editorial.¹ The great craving for salt by salt-using peoples is shown by the fact that wars have been fought for sources of it, people have been executed for smuggling it, and men, women and children sold into slavery for it. There exists therefore the need of explanation for the existence of these two dietary or nutritional situations regarding the consumption of salt.

The explanation probably lies in the distinction between salt in the diet and salt added to the diet. The evidence seems clear that herbivores require salt in their diet. As is well known, herbivorous animals will travel far to reach salt licks which play a large part in their ecology. Carnivores, on the other hand, do not frequent salt licks and presumably acquire the salt they need from their natural diet, i. e., the flesh of other animals. Man for hundreds of thousands of years, from his first emergence as a human being to the food-producing or early agricultural age, was probably primarily a carnivore. As such he required no salt added to his food. With the change from a predominantly meat-eating animal to a large consumer of cereals and vegetables there came the need for additional salt.

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As Meneely has pointed out, this was apparently not due to the smaller actual salt content of the non-meat diet but to the greater potassium content of the cereal and vegetable diet. There is another factor, however, affecting the addition of salt to the food. As man developed a craving and need for salt with his change to a more cereal and fruit diet, the preservative properties of salt were discovered. This resulted in the development of a large variety of salted foods which, in turn, led to a taste for salt and an addiction which today is reflected in the presence of added salt (sometimes in large amounts) in our food and on nearly every dining table, public and private.

Thus it becomes a matter of interest and importance to determine the human need for salt as contrasted with his desire for it, its relation to potassium intake and its possible toxicity or injuriousness, particularly on the basis of long continued intake.

Knowledge regarding the relation of salt to disease has been available for many years. Its relation to edema and to congestive heart failure has been recognized for a long time, even if not fully understood, and most recently acknowledged in the employment of low sodium diets in treatment of these conditions. Allen² considered it important in hypertension, and the rice diet of Kempner³ is an example of the practical application of such theories. Selye⁴ was able to produce lesions in chicks, fed large amounts of salt, similar to those found in nephrosclerosis in man. Sapirstein⁵ produced renal lesions and hypertension in rats by providing only salted drinking water. There is a large literature on salt as an electrolyte in abnormal states, in animals as well as man. The minimal sodium chloride requirements for some laboratory animals has been determined and

the need for salt for the growth of farm animals has been well documented. However, despite this knowledge there is little known as to the actual requirements for man, or what, if any, constitutes a toxic level.

With this situation in mind the Vanderbilt-Thayer group became interested in investigating further the possible toxic effects of salt. Most of the previous animal experimental work has been done with birds because the more primitive renal glomerulus of fowl is more susceptible to injury by sodium chloride. Working with rats, Campbell⁶ had found little or no effect on growth, health and reproduction on diets containing up to 5.06 per cent sodium chloride. At the higher levels some evidence of renal damage was found.

The Vanderbilt-Thayer group studied the effect on rats of diets containing seven levels of sodium chloride.⁷⁻²⁵ The basic No. 1 diet was a synthetic or natural fully-adequate diet, with a low sodium chloride con-

Ration I (Low-Na)	
Casein, Vitamin-Test	25.1%
Cane Sugar	51.8%
Shortening, All-Vegetable	20.0%
Mineral Mixture	2.9%
Vitamins	0.2%

Fig. 1. Composition of basic purified rat ration.

tent, 0.01 per cent (Fig. 1). Diets II to VII contained 0.15, 2.8, 5.6, 7.0, 8.4, & 9.8 per cent NaCl, amounts ranging from what might be considered "normal" or usual for rats to as

DIETARY SODIUM CHLORIDE	
Ration	% NaCl
I (Low-Na)	0.01
II (Control)	0.15
III	2.8
IV	5.6
V	7.0
VI	8.4
VII	9.8

Fig. 2. Sodium chloride content of 7 experimental rations.

high as 9.8 per cent sodium chloride (Fig. 2). The rats were provided with demineralized water and the diet *ab libitum*, and were weighed and carefully examined weekly.

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All seven groups of rats consumed the rations, grew and gained weight. The group on the low salt diet exhibited some anorexia, salt hunger and grew less rapidly. Growth on the control diet (0.15%) paralleled growth on usual standard rat diets.

All in all the rats remained in excellent health during the twenty weeks of the first part of the experiment. Only 17 of a total of 193 died or were sacrificed during the initial 20 weeks; 9 deaths were attributable to dietary stress, less than 5 per cent of the total number or 10 per cent of those on these high salt diets. Six died of causes not related to the diet. These on the higher rations of salt developed a marked polydypsia (Fig. 3) and polyuria, a well known phenomenon of high salt intake with unlimited water. However, beginning in the second month, some of those on the highest level of

salt intake began to show rapidly developing, massive edema (Figs. 4 & 5). Altogether some 15 per cent of the 90 rats on these higher salt diets exhibited this syndrome (Fig. 6). Studies with the radioactive isotope of sodium showed the volume of extra-cellular water to be as great as twice normal in some of the edematous animals. The edematous animals, at necropsy, showed gross edema of the tissues, diminished total serum proteins, severe anemia and azotemia. Blood pressures were elevated in most of the edematous rats tested. Histologic examination of the tissues of these animals showed striking lesions in the kidneys with the glomerulus most severely affected, though the whole nephron was involved. The glomerular tufts were enlarged, the endothelial and epithelial cells swollen, the cytoplasm vacuolated, and the

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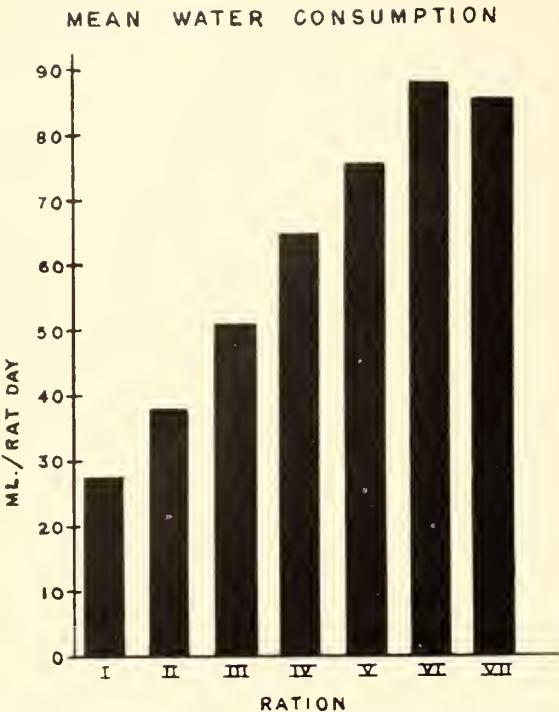


Fig. 3. Mean water consumption by ration first 20 weeks.

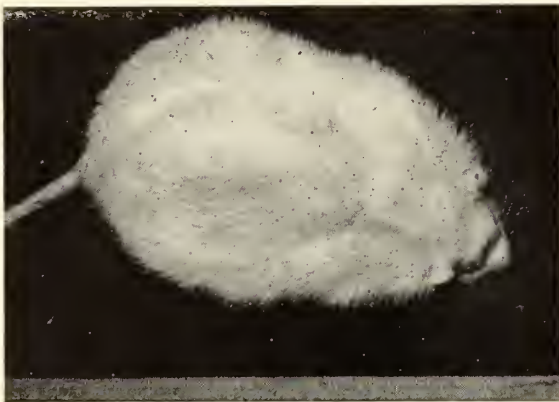


Fig. 4. Edematous rat—note pit on nose produced by finger pressure.

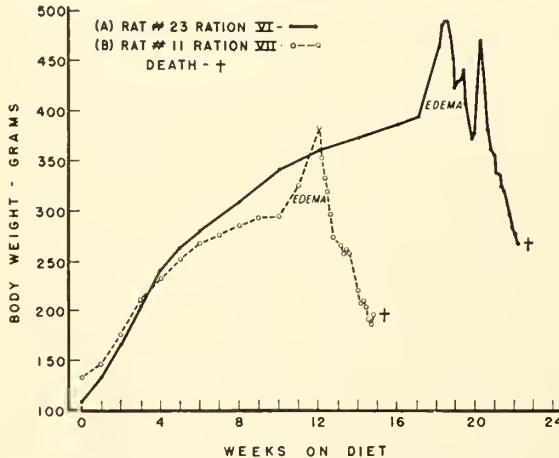


Fig. 5. Weight curves of 2 edematous rats.

CLINICAL FEATURES OF A SYNDROME
OCCURRING IN 15 PERCENT OF RATS
EATING FROM 7.0 TO 9.8% NaCl IN
THE DIET

Time of Occurrence: 2 to 6 Months

- Edema
- Hypertension
- Anemia
- Lipemia
- Hypoproteinemia
- Azotemia

Fig. 6. Clinical picture resembling nephrosis.

nuclei misshapen and pyknotic. The basement membranes were swollen and degenerated. There were large amounts of lipid in the glomerular tufts. The straight and convoluted tubules were dilated and contained precipitate of protein. The lining epithelium was pale and granular, with lipid material in the cytoplasm. The renal arterioles and some small arteries were affected, with lipid vacuoles in the smooth muscle cells some of which were necrotic. In many arterioles the elastic lamina was swollen and frayed, the lumen narrowed or even occluded. Extrarenal arteries were only occasionally involved. However, in rats on the higher salt rations (7.0, 8.4 & 9.8% NaCl) who survived longer and did not become edematous the kidney showed the same or greater changes, and other visceral arterial lesions were fairly constant, especially in the heart, pancreas, testes and gastro-intestinal tract. In those with heart lesions there were areas of scarring.

Reliable blood pressure determinations were obtained beginning with the ninth month. Nearly all the rats on the diets containing the three higher levels of salt (7.0, 8.4 & 9.8% NaCl), and most of these eating 5.6% NaCl, exhibited hypertension (Fig. 7). Significant elevation was found in some of the group on the lowest increased salt diet (III 2.8%). After twelve months the elevation in systolic blood pressure was proved to be in direct linear relation to the concentration of salt in the diets (Fig. 8).

Some of the rats in groups III and IV which were sacrificed failed to show histologic lesions by ordinary examination despite significant elevation of blood pressure. On the other hand, rats from groups V, VI and VII, (7.0, 8.4 and 9.8%) which were sacrificed exhibited lesions resembling those described in the edematous rats but were less severe and less uniform. The involve-

RATS EATING VARIOUS LEVELS OF NaCl

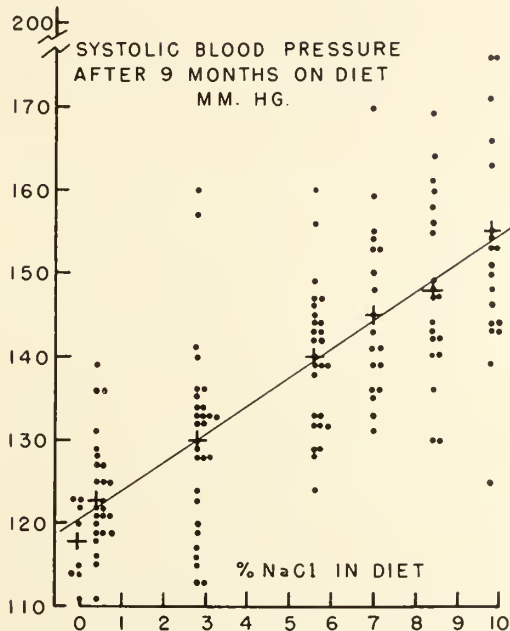


Fig. 7. Systolic blood pressure after 9 months.

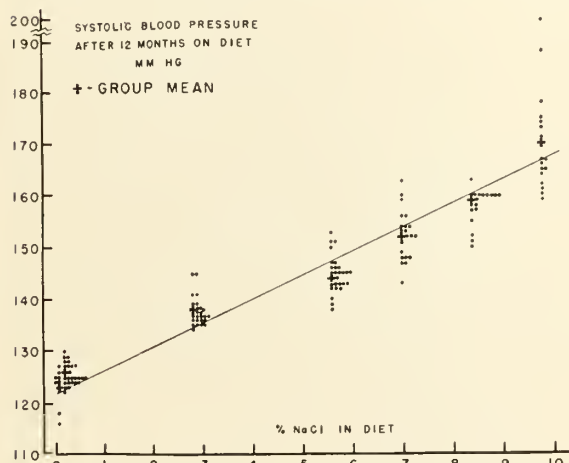


Fig. 8. Systolic blood pressure after 12 months.

ment of the nephrons was spotty and changes in the arterioles when present were usually only hypertrophy of the media. However, some of these rats sacrificed some months later, when they were apparently declining before death, showed lesions equal to those in the edematous group.

Some of the animals in the later months developed dyspnea, edema, enlargement of the heart and elevated venous pressure, resembling congestive heart failure.

Serum cholesterol determinations were made on a few rats in each ration group. Hypercholesterolemia correlated positively with elevations in systolic blood pressure

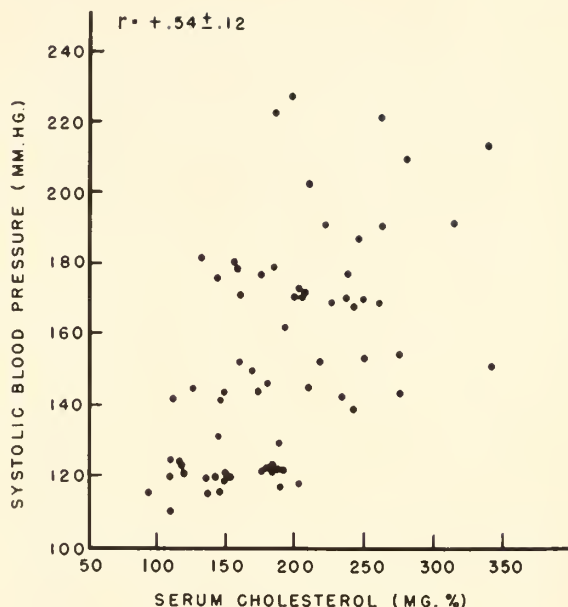
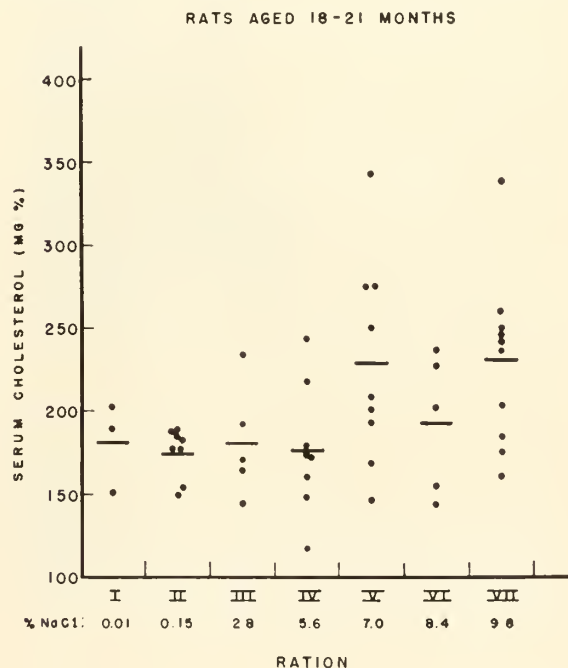


Fig. 9. Correlation of systolic blood pressure and serum cholesterol.



SERUM CHOLESTEROL AND DIETARY NaCl
RATS, AGE 18 TO 21 MONTHS

Fig. 10. Relation of serum cholesterol to per cent of NaCl in ration.

(Fig. 9) and was associated with increased dietary NaCl (Fig. 10).

Electrocardiograms were taken on all survivors after nineteen months on the experimental regimen. Some 80 per cent of the rats eating 9.8% NaCl exhibited abnor-

malities (Fig. 11). The incidence of specific abnormalities (Fig. 12) was also associated with the amount of salt in the ration. Selected tracings are shown for animals with moderate hypertension (Fig. 13) and severe hypertension (Figs. 14 & 15).

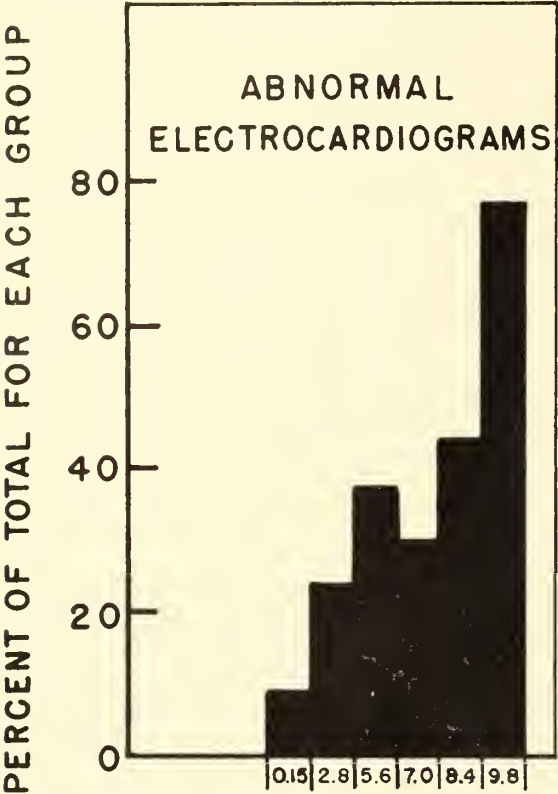


Fig. 11. Relation of incidence of ECG abnormalities and per cent of NaCl in ration.

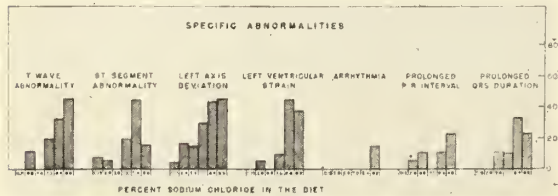


Fig. 12. Relation of specific of ECG abnormalities and per cent of NaCl in ration.

The mean maximum body weight achieved was related to the amount of salt in the diet, decreasing significantly (Po. 01) at the lowest level (0.01% NaCl) as well as at all of the levels above the control group. An exceptionally obese rat (Fig. 16) in the control group at an intake level of 0.15% NaCl achieved a maximum weight of 1008 grams at which time his systolic blood pressure, serum cholesterol and electrocardiogram were normal. Obesity was observed in a few rats at all levels up to and includ-

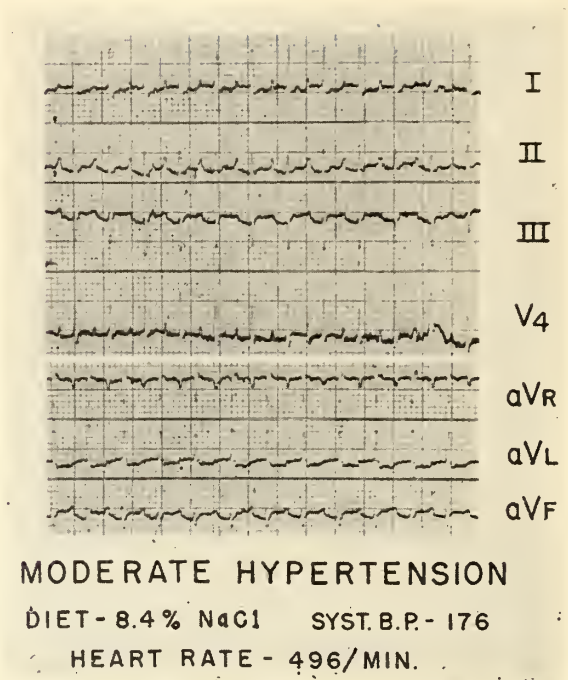


Fig. 13. Electrocardiogram of rat after 19 months on 8.4% NaCl.

ing 5.6% NaCl. It was not seen in rats eating 7.0% or more of NaCl in the diet. A surprising incidental finding was the negative correlation between the maximum body weight attained and the systolic blood pressure at maximum weight (Fig. 17).

The adverse influence of different levels of added salt upon survival is indicated in Fig. 18. Two additional groups of rats from a later experiment eating 21.0 and 14.0% NaCl are included on the survival curve. All rats on the 21.0% NaCl ration were dead at nine months. After fifteen months the per cent survival of the rats on the low salt diet (0.01% NaCl) was markedly lower than the controls (Fig. 19).

Mean adrenal weight (Fig. 20), heart weight (Fig. 21), and kidney weight (Fig. 22) in mg./kg. of rat were increased with added dietary salt. The mean length at death, measured from the nose tip to base of tail at autopsy, followed the maximum weight findings, i. e., significantly greater length in the control rats than in the low NaCl (0.01%) and stepwise decreases as dietary salt increment increased (Fig. 23).

The experiment has continued, although all original animals have died. Others have been started on similar experiments, with particular reference to the relationship of potassium and sodium.^{24,25} Females fed

high salt diets produced fewer and smaller litters but did not develop symptoms of eclampsia. Pair feeding at the 5.6% NaCl of the purified diet and a commercial ration produced remarkable similar mean systolic blood pressures (Fig. 24).

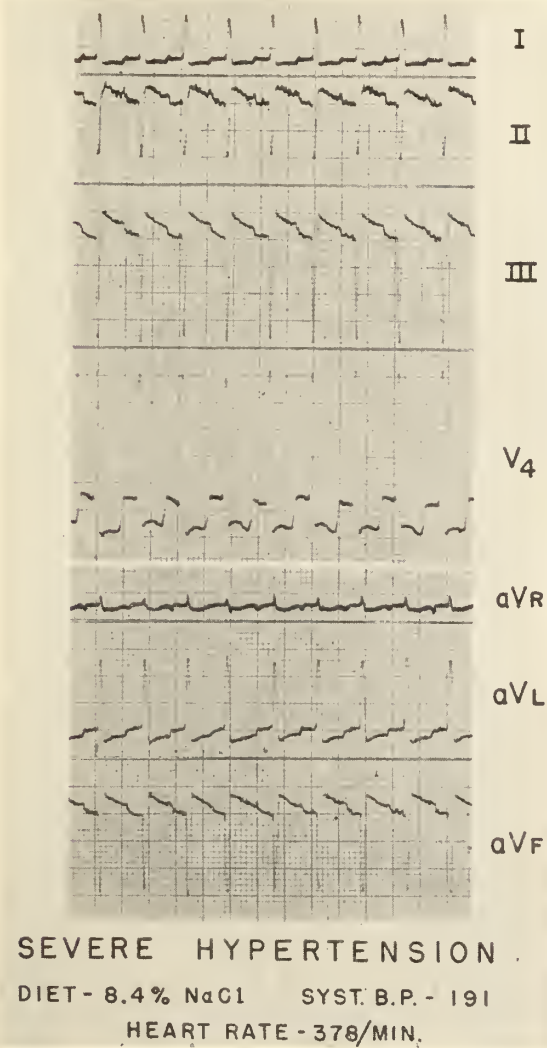


Fig. 14. Electrocardiogram of rat after 19 months on 8.4% NaCl.

It is clear that these findings must be taken only for what they are, that increases of salt in the diet of male rats produced, under the conditions of the experiment, pathologic lesions and increased blood pressure proportional to the concentration of salt. The effect seemed to be greatest on the growing animals. Also it is to be noted that some 1/3rd of the rat's life had passed before the more significant changes appeared. However, they seemed significant enough to extend the study to other species. Therefore, the study has been extended to dogs.

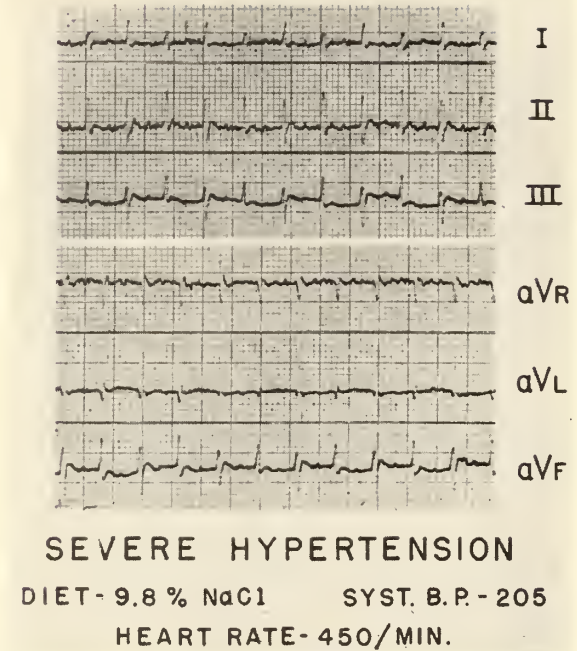


Fig. 15. Electrocardiogram of rat after 19 months on 9.8% NaCl.



Fig. 16. Obese rat after 20 months on control ration (0.15% NaCl).

Twenty-four litter mate pedigreed male beagles were divided into four matched groups and placed on specially prepared diets* containing 0.2% (low), 1.4% (control), 6.0% and, initially, 12.0% NaCl. After four weeks of feeding, the group on the 12.0% NaCl showed such weight loss and

*Analysis of the dog chow as given by the Ralston Purina Company; moisture 8-10%, protein 20%, fat 6%, carbohydrate 49%, calcium 1.5%, phosphorus 0.8%, vitamin A-5 I. U. per gm., vitamin D-1. U. per gm., thiamine-3 U. per gm., riboflavin-5 U. per gm., panthenic acid-15 U. per gm., NaCl-0.2%.

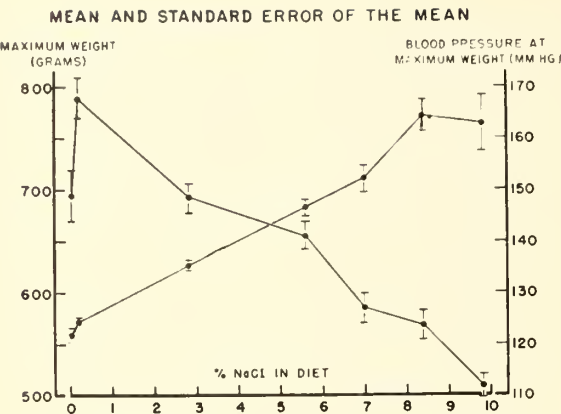


Fig. 17. Maximum weight attained and blood pressure at maximum weight of rats eating 7 levels of NaCl.

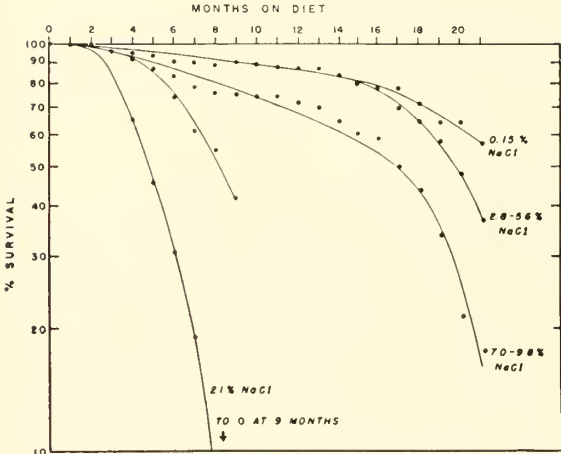


Fig. 18. Longevity % survival of rats eating 0.15 (control), 2.8, 5.6, 7.0, 8.4, 9.8, 14.0 and 21.0% NaCl. The slope of the line indicates mortality rate.

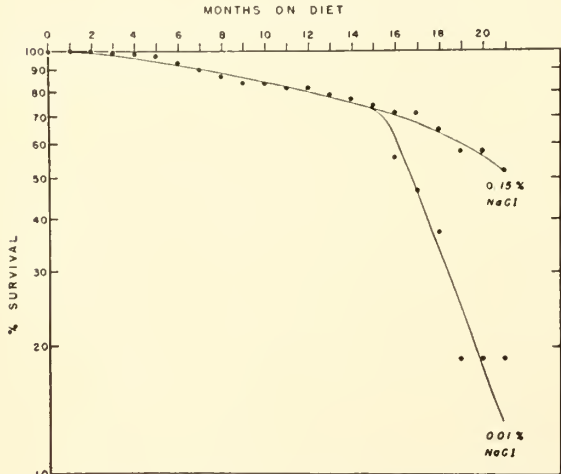


Fig. 19. Per cent survival of low NaCl (0.01%) and control (0.15% NaCl) rats.

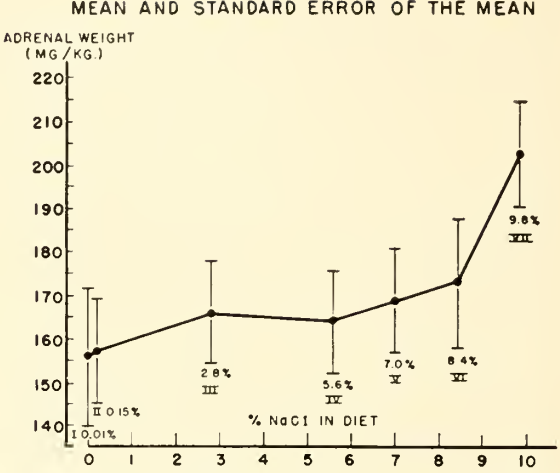


Fig. 20. Mean adrenal weights of rats eating 7 levels of NaCl.

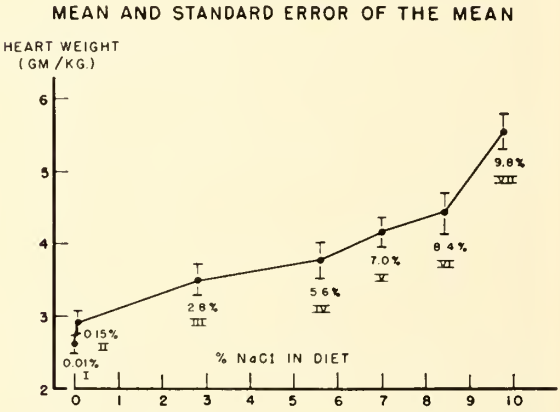


Fig. 21. Mean heart weights of rats eating 7 levels of NaCl.

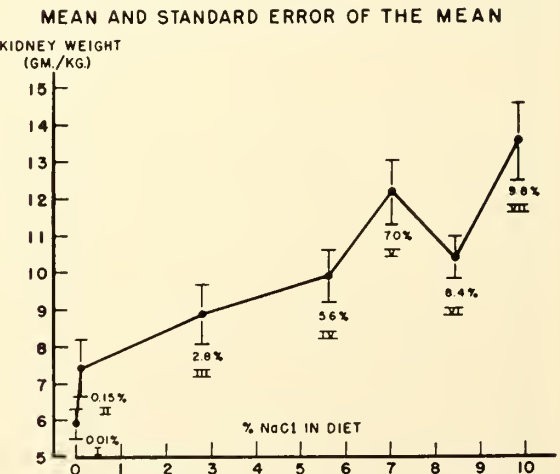


Fig. 22. Mean kidney weights of rats eating 7 levels of NaCl.

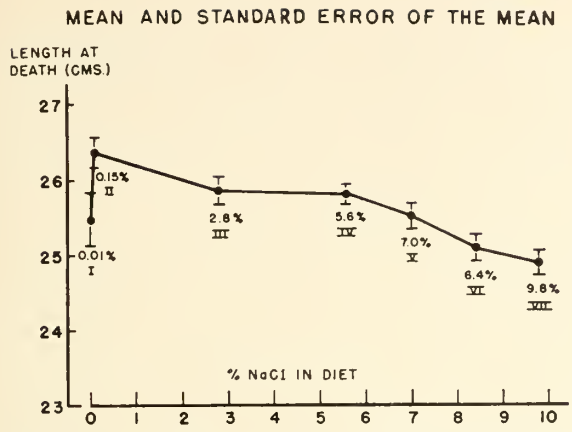


Fig. 23. Length at death measured from tip of nose to base of tail in relation to per cent of NaCl in ration.

HYPERTENSIVE ACTION OF DIETARY NaCl

♀ rats after 10 months

Ration	% NaCl	Systolic Blood Pressure		
		Mean	±	S. D.
Purified Control	0.15	124.2	±	2.1
Purified	5.6	139.3	±	0.4
Purified	9.8	149.8	±	1.3
Commercial	5.6	140.1	±	1.2

Fig. 24. Comparison of hypertensive action of purified and commercial rations containing 5.6% NaCl fed female rats.

anorexia that the dietary level of salt was changed to 9.0%.

The dogs were weighed and examined at weekly intervals and the following measurements made on each animal every three weeks: mean blood pressure by femoral artery puncture, serum cholesterol, hemoglobin determination, hematocrit and complete hematologic study, including erythrocyte, leucocyte and differential counts. The data obtained after 26 weeks are summarized below.

I. *Growth*: There was no difference in the rate of growth of dogs on the low NaCl (0.2%) and the control group receiving 1.4% NaCl. The dogs on the high levels of NaCl grew more slowly than the animals on moderate or low levels of sodium. During the 26-week period the average weight gain for the individual dogs was 7.46 pounds + 1.13 for the group eating 0.2% NaCl, 6.92 pounds + 2.31 for the control group, 3.58 pounds + 2.64 for the dogs at the 6% level,

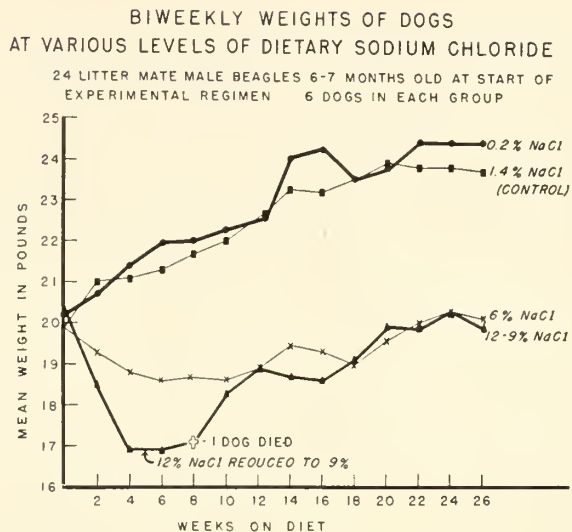


Fig. 25. Weight curves of dogs eating various levels of sodium chloride.

and 2.95 pounds + 1.13 for the group eating the highest level (12% and, later, 9%) of NaCl. These data are shown graphically in Fig. 25.

II. *Blood Pressure*: Several different methods for measuring blood pressure were tried during the earliest phase of this study. The direct method by femoral artery puncture proved most satisfactory. The dogs are now well trained and the readings of mean arterial pressures for individual animals are quite reproducible. No differences developed in the mean blood pressures of dogs on various levels of dietary sodium chloride for the first 26 weeks of feeding. This is to be expected at this time in the experiment since the albino rats do not exhibit the phenomena of chronic hypertension until the ninth month of feeding which represents about 1/3rd of the life span of the rat.

Average arterial blood pressure after 26 weeks on diet:

NaCl content of diet	No. of dogs	Average blood pressure (mm. Hg.) x + S. D.
0.2%	6	124+14
1.4%	6	123+15
6.0%	6	128+16
9.0%	5	127+11

III. *Serum Cholesterol*: The serum cholesterol concentrations in all dogs were within the normal range. The experimental findings range from 120 to 188 mg.% and there were no significant differences in the

average values for the groups. There is no apparent association of individual weight gain and serum cholesterol concentration.

Average serum cholesterol values after 26 weeks on diet:

NaCl content of diet	No. of dogs	Serum cholesterol mg % x + S. D.
0.2%	6	153+21
1.4%	6	144+24
6.0%	6	153+21
9.0%	5	148+26

IV. Hemoglobin Concentration and Packed Cell Volume: The average values for hemoglobin concentration and packed cell volume of animals were essentially the same in dogs on the low NaCl diet, the con-

HEMOGLOBIN AND PACKED CELL VOLUME
AFTER 26 WEEKS ON DIET

% of NaCl in the diet	No. of dogs	Average hemoglobin concentration (gms. per 100ml. blood)	Average packed cell volume
0.2%	6	15.6	46.3
1.4%	6	14.9	44.0
6.0%	6	15.0	44.8
9.0%	5	13.4	41.2

Fig. 26.

trol ration and the 6% NaCl ration but both the hemoglobin and packed cell volume were considerably reduced in the group receiving 9% NaCl (Fig. 26).

V. Erythrocyte and Leucocyte Counts: The numbers of erythrocytes and leucocytes per unit volume were reduced in the group

ERYTHROCYTES AND LEUCOCYTE COUNTS
AFTER 26 WEEKS ON DIET

NaCl content of diet	No. of dogs	RBC per cmm. blood x 10 ⁶	WBC per cmm. blood
0.2%	6	6.00	13,200
1.4%	6	5.57	13,600
6.0%	6	5.50	13,400
9.0%	5	5.18	12,600

Fig. 27.

on the highest level of NaCl. The blood picture of the other three groups, receiving 0.2, 1.4 and 6.0% NaCl, remained unchanged (Fig. 27).

The earliest signs of NaCl toxicity observed in those litter-mate male beagles were slight inhibition of growth and reduction of hemoglobin. Base line values for blood pressure, serum cholesterol, hemoglobin level and blood cell distribution

have been firmly established. Serial electrocardiograms were within normal limits. The studies have been continued in order to detect other early changes, particularly in blood pressure and serum cholesterol, which may result from the experimental regimen.

As the animals on high levels of salt begin to show further evidence of deterioration, additional biochemical and physiologic measurements will be made. If hypertension is manifested, these studies will include the measurement of sodium space and electrolytic metabolism, renal function studies, and investigation of lipid metabolism. As the experiment progresses, those lines of investigation which show promise will be pursued and many procedures can be followed which are technically too difficult on a small animal such as the rat.

DISCUSSION

These findings must be interpreted with caution. It is clear that in rats the long continued intakes of large amounts of salt produce morphologic and functional changes even when unlimited water is permitted. These changes increase in severity as the amount of salt ingested daily increases. At certain stages in the course of a high salt diet some animals develop a disease picture closely resembling that of nephrosis in humans. These constitute a smaller proportion of the total number and the incidence is highly individual. The bulk of the animals live and grow (though not normally) until they develop in increasing numbers a condition closely resembling chronic glomerular nephritis, with lesions in arterioles which sometimes resemble those seen in malignant hypertension in man. Despite that, some animals live to an old age, for one animal an age corresponding to almost 90 years for a man.

Two aspects deserve special attention: first, the changes have been produced in young growing animals and, second, the lesions do not appear to any significant degree until approximately one-third of the life span of the animals has been passed. The latter is significant in relation to the result so far observed with the dogs.

The meaning of these findings with respect to the effects of salt intake in humans depends to a great extent on the human requirements of salt. As I have said, these are unknown. It is clear that customary intakes of salt, expressed as aver-

ages, do not by any means necessarily represent requirements or even what may be called normal intakes. There is enough evidence to indicate that such intakes are merely customary intakes, the result of education or artificially developed tastes. Variation in these customary intakes in various populations supports this conclusion. On the other hand there is no doubt of the necessity for salt. This is demonstrated by animal experiments, including the results with rats reported here, by historical evidence and by general zoologic data. Aside from such evidence as the occurrence of salt deficiency disease in hot environments, evidence such as that of Allen and Sherrill,² who encountered symptoms of salt depletion in patients with hypertension treated by a low salt diet, gives a rough quantitative measure of minimal needs. It is important to point out, however, that these amounts varied rather widely, individually were affected by the existing disease, and that variations apparently occur in healthy persons. Nevertheless, with symptoms from too little and symptoms from too much we are again on the horns of a dilemma²⁶ with respect to a prophylactic or therapeutic procedure.

Just what levels of intake of salt are capable of toxic effects, or the factors which may affect one way or another such effects, are generally unknown. However, some rough idea may be gained. It is worth noting that the salt content of experimental diet III used with the rats (2.8% of NaCl) compares roughly on a weight for nutrient basis with the human intake of about 12-15

COMPARISON WITH HUMAN DIET		
Protein	100 Gm.	400 Cal.
Fat	100 Gm.	900 Cal.
Carbohydrate	300 Gm.	1200 Cal.
<hr/>		
TOTAL	500 Gm.	2500 Cal.
<hr/>		
500 Gm. x 0.028=14 Gm. NaCl/day		

Fig. 28.

gm. of salt a day, a common estimate of the salt in the diet in this country (Fig. 28). Also, it may be significant that salt intakes very much lower than the customary intakes are effective in a significant number of persons with hypertension, which suggests that the customary level, under some as yet unknown conditions, may possess such a potential.

26. Youmans, J. B.: Editorial: The Horns of a Dilemma, *Am. J. Med.* 11, 133, 1951.

More General Practitioners Can Now Treat Alcoholism—It is now possible for more and more general practitioners to provide the first necessity in treatment of the chronic alcoholic—which is simply to make him feel better through medical care.

Dr. Marvin L. Block, Buffalo, N. Y., chairman of the American Medical Association's committee on alcoholism, said that patience and understanding, psychotherapy, and sometimes the help of specialists is needed for long-range treatment of the alcoholic.

However, the first steps are now within the reach of more doctors than ever before through improved medical techniques and new drugs, he said in the December 29 *Journal of the A. M. A.*

The necessary psychotherapy can be administered by the average physician if he will take the time to understand and help the sick alcoholic. However, the medical treatment of alcoholism is rapidly becoming more important in accomplishing recovery, he said. Because of the fear and threat that so many alcoholics feel about any treatment, a medical approach seems much more acceptable. As the patient's physical condition improves, he feels better and is more willing to cooperate and accept psychiatric treatment.

"In the chronic alcoholic we are dealing not only with a sick individual but with that individual in relationship to his environment," Dr. Block said. Therefore, his social situation, religious background, employment or industrial situation, and his relationships with family, friends and fellow employees are pertinent factors.

While it is not always necessary to treat the patient in a hospital, "there is no doubt that this is the best setting for such treatment," he said. Necessary equipment is readily available. In addition, it is frequently advantageous to get the patient away from his family, since "all too frequently the family is in an unfavorable emotional state during the patient's intoxication."

General hospitals should be willing to accept alcoholic patients, he said. Records have shown that alcoholic patients offer no more difficulty for hospitals than any other sick persons. In fact, the hospital's attitude that the acutely ill alcoholic patient is sick and is welcome for treatment makes these patients more cooperative than many others, he said.

Dr. Block then discussed at length the specific medical treatment of alcoholism. He said his discussion was arranged to fit within the framework of the practicing physician's experience and knowledge. His report is the first of a series on the treatment and the physiological, psychiatric and sociological aspects of alcoholism, according to Dr. Richard J. Plunkett, secretary of the A. M. A.'s council on mental health.

Dr. Plunkett said the council and the members of its committee on alcoholism believe that much of the recently developed information on the most effective methods of treating alcoholism in private practice and in the hospital has not had wide circulation. As a result many patients are not receiving the necessary attention and treatment that could and should be given them.

PRESCRIPTION FOR COMPLACENCY

ARTHUR V. WIEBEL, President

Tennessee Coal and Iron Division
United States Steel Corporation
Birmingham, Alabama

Back in June when your president, Dr. McCafferty, extended his invitation to me to come down here and talk with you fine people, I was having plenty of trouble. At that time we were right in the middle of what turned out to be a 98-day strike. It wasn't one of our happier days.

But I decided that if a fine man like your president in a sense took pity on a strike-bound steelmaker whose company hadn't made any steel in more than two months—and it looked like we weren't going to make any for a good while after that—there was still some hope left.

So, while guiding my company through an \$80,000,000 labor dispute, I gave some thought to writing a "Prescription"—some nerve!

Well, things look a lot better these days. We're back making steel. And tonight I have the chance to make good on that invitation that came when things were looking pretty black—and you are in the unfortunate position of having to listen to this "Prescription" from "Doc" Wiebel—a steelmaker!

Even though my mind at that time was on thoughts other than speech-making—at least the kind of speech that must be made in an open meeting such as this—I accepted your invitation. I accepted it because—and I don't know whether this is a hangover from labor difficulties or not—I accepted it because it seemed to me that I could talk pretty straight to a group like this and, by so doing, get a few things off my chest. And I felt that there were one or two important things that needed saying, without pulling any punches.

You may have serious doubts as to what a steelmaker could have in common with a group of professionals in the field of medicine. Frankly, there was some question in my mind on that count, too. I wondered just how much we have to talk to one another about. Not that we don't have a number of common problems. But I'm afraid

the doctor and the industrialist aren't too well accustomed to sitting down together, man to man, and thrashing over their mutual problems.

In fact, I'm not too sure just what your biggest worries are—socialized medicine? medical quackery? maintaining professional standards? a cure for cancer? or something totally different?

I suspect you're not at all certain what kinds of problems I'm concerned about. Production, some of you may say . . . or profit and loss. Well, that's true. But that's shop talk, and I like to leave that pretty much back at the office where it belongs. There are other problems I have on my mind right now.

And the first one I'd like to present to you is one which has to do with communications—communications between you and me, between the medical man and the businessman. We don't understand one another nearly well enough. And that isn't good.

We each have important jobs to do, with large and important responsibilities. And we have one great goal in common. For if you boil things down into very simple terms, you will find we're both working toward the same end—helping people. In this sense, we're in the same business.

And that is why it disturbs me greatly to realize that you and I aren't getting the word across to one another. Our communications are crippled.

Who's to blame?

Well, of course, we both are. In keeping our noses to the grindstone, we've become a little shortsighted in some respects. We're so intent on the job we're doing, and so thoroughly convinced of its importance above all others, that we don't take much time out to worry about the other fellow. And we often get dangerously close to the state of not caring whether the other fellow is in trouble or not. Of course, when somebody pins us down and asks why we haven't been paying any attention to their problems, we're all ready with some answer

like "I've been too busy . . . I don't know much about that kind of thing . . . It's really not my problem."

Well, ladies and gentlemen, that kind of complacent attitude won't work any more. You and I know that the day has long passed since we could sit quietly by in our own professional circles and let the rest of the world take care of itself.

So, before I came down here, I decided that there was only one approach I could use in speaking before a group like yours—and that is the direct approach, with no beating around the bush, no long-winded praises for the many fine things you've done, perhaps a little healthy criticism. If we're going to understand one another, we'll have to speak plainly. I think it would be an insult to your intelligence to do otherwise.

It's this matter of complacency within professional groups that I'm concerned with tonight. Don't misunderstand me, I'm a professional man, too! We have the same thing in the business world . . . and in some respects it's even worse. But we're working on the problem, as I know you are. And because it is such an important one to both of us, I'd like to discuss it with you.

There is one particular area in which complacency has caused a lot of trouble in recent years, and it's due to cause us a lot more grief if we don't do something about it in a hurry. It is a common problem and a common aim of the man of medicine and the man of industry—SECURING GOOD GOVERNMENT!

I was talking about this problem with a doctor friend of mine in Birmingham the other day and he came up with the story of a discussion held one day between a surgeon, an industrialist and a politician. They were arguing as to whose profession was the oldest.

Said the surgeon: "Eve was made from Adam's rib, and that surely was a surgical operation."

"Maybe," said the industrialist, "but prior to that, order was created out of chaos, and that was the job of industry."

"But," interrupted the politician, "somebody created the chaos first!"

Well, before we get into a discussion of that kind of chaos, I'd like to review a few of the ways in which you, as doctors, and

those of us in industry have tried to handle some of the specialized problems that have come before our groups from time to time.

As members of a professional group, you have banded together into various medical associations, of which the Gulf Coast Clinical Society is a notable example. Within such groups, specialists from various branches of your profession are brought together to exchange knowledge and ideas, to transmit new discoveries, and to strengthen the bonds of your profession. Likewise, you have used such groups to establish and enforce standards for the practice of medicine. And in more recent years, you have set up grievance committees to which the individual patient may resort, if he feels he has been treated unfairly by his physician. In addition, your groups have served as spokesmen on your behalf before the general public. In this manner, you have made yourselves heard on such commanding topics as socialized medicine, misleading advertising of drugs, the pitfalls of quack treatment, and the like.

In all, you have sought to keep your members well-informed of developments within the field of medicine; you have insisted that they hew to the high standards of your profession; you have spoken out strongly on public issues related to your work.

Likewise, in the steel industry we have established organizations to serve the needs of our profession. The most prominent of these is, perhaps, the American Iron and Steel Institute. Through this body we are able to conduct an exchange of ideas among various groups of specialists; we are able to establish standards for the industry; and we are afforded a public opinion instrument for national issues related to our particular industry.

Thus, we in business and you in medicine have assigned to our respective agencies the job of maintaining professional standards and of affording proper representation before the public on issues which are important to us as a group. And as individuals we have worked toward these ends.

But more and more we have been led to realize that our individual and organizational obligations go beyond the technical limitations of our jobs. In seeking to safeguard personal health or economic health, we have found that there is much more involved than the matter of making good

steel or arriving at an accurate medical diagnosis. And in this discovery, we run head-on into a problem that is vital to all of us—securing good government at all levels.

You in the medical profession—like most of us—have devoted your efforts to those matters which directly affect you. In the matter of government, you usually have been heard from only on issues which have had direct bearing on your professional activities and endeavors. And it seems to me that, in this sense, you—like most of us—are battling the symptoms, rather than the disease.

To demonstrate this point, I'd like to discuss with you a topic which is near and dear to the heart of any businessman—productivity. This is a bit of terminology by which we refer to the quantity of usable goods which can be produced in a given period of time with a given amount of labor and a specified investment in tools and equipment.

High productivity is, of course, the basis for a sound and healthy economy. If a man can produce goods more efficiently, he may come to enjoy a richer material life. On the other hand, if he is lazy, unproductive, inefficient, his future is well on the way to becoming one of misery, drudgery and poverty.

And this reasoning fits well with our traditional ideas on government. Government should be and must be designed to serve. It is nourished by the interests and energies of all our people. It functions in response to our forceful action, and reflects our individual opinions, our hopes, and our beliefs. It is sustained by our material productivity, our sound judgment, and our constant vigilance. It is sustained by our "cold, hard tax dollars!"

But some rather ugly notions have crept into our thinking in recent years to disturb these honest concepts. They are introduced, from time to time, by a number of loud-spoken political proponents of a new kind of future. They talk about this new era in terms of "guaranteed security for everybody" or "each according to his need." What they pretend to offer is SOMETHING FOR NOTHING EFFORTLESS SECURITY WEALTH WITHOUT PRODUCTIVITY.

With such sorry promises, they work their way into our local government, our state offices, and even into federal legislative bodies. Soon they take firm hold on

important segments of our government. All of a sudden we wake up to find these men directing the affairs of our municipalities, our states and the nation.

We later discover that they got away with it all because of *INDIFFERENCE*—because *too few hands were raised*—too few went to the polls and voted! So, they took over the machinery of our democratic institutions for their own devices—sometimes to gain power, or money, or influence, or simply to impose on the people whom they were chosen to serve a *riddle of warped economic and social thinking!* And all the dignity and noble intent of good government has been sold down the river in exchange for their selfish, vain and destructive ambitions.

In the end we learn that government has been robbed of that element which we, in industry, value so greatly—high productivity. Government has ceased to serve. It no longer conducts itself as the agency to perform the necessary tasks which individuals or smaller groups are incapable of performing of themselves and by themselves. But it has become a source of free-wheeling power and wealth for the benefit of a few, paid for by the labor and sacrifice of the many.

And how does such a condition come about? Who is to blame?

Well, it begins with a *SICK ATTITUDE TOWARD GOVERNMENT* on the part of a great many lazy people. They are unaware of the true functions and responsibilities of government. They are taken in by the golden promises of "guaranteed security" and socialized "share-all." They fail to understand that this kind of so-called "security" may be bought only at the price of regimentation . . . regimentation and a slow, sickening decay of the strength and vitality of democratic government. Their selections for representation in government are based on short-sighted reasoning and a weakness for letting "Joe"—good old Joe—take care of the situation! They have failed to recognize their civic responsibilities.

And who is to blame for this lazy and *indifferent* approach to the problem of securing good government? The truth is that you and I are largely at fault!

Why?

Well, let's look back again to our discussion of the role of the businessman and the role of the doctor in serving the nation. The businessman looks to economic health; the

physician to physical well-being. But more importantly we are both concerned with the overall welfare of mankind. And here our responsibilities take on far greater proportions. Here we come to recognize that it is not enough to provide man with a healthy body. It is not enough to furnish him with manufactured goods. He has a right to that kind of individual dignity which can come only through standing on his own two feet, making his own decisions and accepting the responsibility for making his own way in the world.

And who's to defend these rights? Supposedly every member of our society. But we know that's not the way it works. If it was, the matter of obtaining and keeping competent government would not be so complex and difficult. Unfortunately, too many are willing to leave these responsibilities to others. And so it falls to those of us who, in good conscience, feel obligated to this duty to work even harder. We must strive to give public opinion proper direction. This must be done not in the sense of pulling the public along by the scruff of the neck, but as the spearhead of forceful and vocal representation of the best interests of all our people.

And here is where you, as men of medicine, enter the picture. Here is where you must step beyond the strict limits of your profession to assume a new type of leadership.

"But why pick on the doctor?" you may ask. Surely he has about all he can manage in waging a 24-hour-a-day battle against physical disease. The demands and complexities of modern day medical practice should earn him some relief from further obligations.

Unfortunately, this is not the case. And here are some very substantial reasons why. First, you have the responsibility of leadership. This responsibility is yours because of the great wisdom and native intelligence which God has granted you. Only the man or woman with keen intellect becomes a doctor. It is my firm belief that the man who does not fully use these talents bestowed upon him is breaking faith with his Creator.

Second, you, as individual doctors, have an opportunity that is granted to few of us, in that, through your work, you come in intimate contact every day with people

from all walks of life. You make their health problems your business. You are concerned with them, not as the public, but as individual people. They depend upon you. Thus you build up a relationship which can hardly be constructed in any other way. Yours is a wonderful opportunity to cure a lot of ills besides the physical ones. Furthermore, you are obligated to this duty because the entire future of your profession as you know it today is at stake. You know and I know that the private practice of medicine wouldn't last very long in a jungle of socialized government monopoly.

You know, in many respects, we have come to a sad state of political affairs because the real thinkers and doers in our midst have not made themselves heard. They fail to speak their minds!

But the time has passed when you and I could merely sympathize with one another over the unholy mess so often caused by political irresponsibility. We can no longer take as matter of fact the obvious inefficiency and corruption of bad government. It is up to each of us—to you in medicine and to each of us in business—to work for sound political policy. This is not a job for others with "more time" or with "more to gain" or with "a better knack for doing that sort of thing." It is an obligation we can not possibly avoid.

If, with our knowledge and abilities, we can teach others an appreciation of the values of freedom; if we can stir others from indifference; if we can reveal to them the criminal waste of corruption and patronage in offices of trust; if we can lead them to take a conscientious interest in securing good government, we shall have rendered, perhaps, our greatest service to our community neighbors, our states, and the nation.

If, from a combination of practical business appraisal and the calm analysis which is the doctor's habit, we can expose the fallacy of "security at any price" and show it for what it is—a disease which will drain the energies, the vitality, in fact, the very life of our democratic society . . . then we may produce one of the greatest life-giving discoveries of our generation! And that is that no government, large or small, can be justified *but* by the honest productive service it renders to its people.

This, then, is the "Prescription," the PRESCRIPTION FOR COMPLACENCY. And for you men of medicine, it is a new opportunity to serve mankind. In good conscience, I know

you will accept this even if it is at the suggestion of a steelmaker—a profession, if you please, that must deal in nothing less than cold, hard facts!

FECALITH OF THE APPENDIX CAUSING ACUTE SUPPURATION

KIRK R. DEIBERT, M. D.

Florence, Alabama

and

LOREN GARY, JR., M. D.

Tuscumbia, Alabama

The recognition of intra-abdominal calcifications is best accomplished by a preliminary plain film of the abdomen. At times the calcification can be identified on such a scout plain film as an emergent examination. If a suspicious calcification is noted however in an obscure fashion, a cleansing process will be needed to relieve the obscuring effect of the overlying fecal content. At other times detailed radiographs may be obtained for localization. Quite frequently a calcareous deposit will be overlooked on opaque medium studies of the intestinal tract when not preceded by a preliminary scout film of the abdomen.

It has been estimated that appendiceal concretions may be demonstrated in 15% of the cases. The identity of biliary or urinary concretions possessing calcification is of a much higher percentage than that. Most of the time these calcific areas can be recognized as to visceral location by specific anatomic situation in the abdomen. However, visceral anomalies of position may exist so definite location becomes difficult.

The presence of biliary calculi assumes cholecystitis. In the absence of icterus a cholecystogram will clinch the diagnosis. Pancreatic calcifications are located ventral to the second lumbar interspace. Their presence may be indicated by just a few calcifications at this level or myriads may be present lodged both to the right and left of the spine in an arcuate distribution. This also assumes a direct diagnosis of chronic relapsing pancreatitis. Urinary calculi, with their attended obstruction to urine flow or secondary inflammatory reaction, will be readily recognized by a pyelographic study.

The suspected presence of a fecalith should be recorded in a clinical survey as a possible source for acute obstructive or suppurative appendicitis. Such a concretion is usually situated in the lower right abdomen. Fecaliths may be single or multiple, round or oval, and frequently are laminated and irregular to resemble a gallstone.

It is not uncommon that the final diagnosis for an initially suspected acute cholecystitis with calculus perforation will become acute gangrenous appendicitis with fecalith penetration and subhepatic abscess formation. Such a case was recently observed. A laminated concretion was noted on the plain film of the abdomen in the right upper abdomen. A sufficient amount of the lower right thorax was included on the scout film to identify pleural blunting of the angle and basilar pulmonary compression with linear atelectasis. Both clinically and radiographically a soft tissue mass was present in the right upper quadrant accompanied by a secondary reflex intestinal ileus pattern. At operation an inverted cecum was found to place the perforated appendix in a subhepatic situation. The ruptured fecalith, with the attendant suppurative process had caused an infrahepatic fistula and abscess. Subphrenic inflammatory reaction was also found.

In contrast to this, a case report pertinent to these above notations will be presented.

A robust white male (J. D. J.), aged 36, was admitted to the Colbert County Hospital, Sheffield, March 21, 1955. His occupation was that of a policeman, and he had had no prior operation. Elsewhere, several years before, he had been diagnosed as having a duodenal ulcer. Since then, he had no particular complaint after having

been placed on a medical regimen.

The cause for this current hospitalization was the onset of a moderately severe type of pain in the upper abdomen. He was advised to come to the hospital the day prior by his physician at the outset of this pain. This was refused so he went home after receiving a narcotic injection. At the time of his present admission to the hospital his pain had returned to a much severer extent. This pain recurrence came after being allayed for about ten hours from the day before. The physical examination revealed slight tenderness in the epigastrium to palpation without a rebound phenomenon. The pain did not extend nor radiate to any other area. No rigidity nor mass was elicited. During this initial twenty-four hour period of observation he was given opiates, intravenous infusions, Sippy regimen, saline enemata, and vitamin K, plus other lesser supportive measures.

The initial impression was an acute surgical abdomen perhaps due to a penetrating duodenal ulcer. The clinical laboratory findings were: Urine, negative; red blood count and hemoglobin, normal; white blood count 14,250 and 14,650, with a 75% neutrophile count. The temperature range was 99.2 to 100.6 degrees, respirations 24 and pulse 112. The rectal examination was negative. Radiologic report: 1. Erect P. A. chest examination is negative. 2. Plain films of the abdomen: The renal shadows and psoas lines appear normal. No intra-abdominal free air is noted. There is a small amount of air and semi-opaque fecal content in the cecum. Immediately adjacent thereto several semicalcific areas are identified over the wing of the right ilium. There is a small amount of air scattered throughout the stomach, colon and small bowel. These latter air-contained loops are thought to be ileum. This, coupled with the calcific bodies, could represent an early ileus reaction to appendiceal fecaliths. By inference an acute lith reaction could exist. (Refer to Figure No. 1 of the date March 21, 1955.)

The morning of the following day the patient's pain became localized in the right lower quadrant. Marked tenderness was noted there to palpation, with rigidity. No pain was described to be present in the epigastrium. The attending surgeon who had been closely observing the patient de-

cided upon an immediate exploratory operation. A large edematous partially gangrenous appendix was identified with difficulty in a retrocecal situation. The ap-



Fig. 1. (J. D. J.) Plain film of the abdomen. Reveals a small amount of air scattered throughout the intestinal tract. Several calcific densities are noted in the right iliac fossa. This, coupled with the slight small bowel ileus pattern, would suggest a periappendicolith reaction.

Fig. 2. (J. D. J.) Postoperative specimen radiograph. This reveals the appendix to be quite large, distended and bulbous. It possesses numerous calcareous fecaliths.

pendix was quite red and the tip had a black appearance. The mesocolon was also inflamed and edematous. A moderate amount of fluid was found in the retrocolic gutter. Following the hazardous delivery of the viscus, numerous intraluminal fecaliths were identified by palpation. (Note insert in figure No. 1.) The incisional site was closed with one cigarette drain. The patient did very well during his postoperative course and was discharged from the hospital on his fifth day. He had no complications.

The pathologist's report reveals the appendix to measure 7.8 x 1.0 cm. It is brown, granular and soft. The mucosa is ulcerated and the wall is infiltrated by neutrophiles. The final diagnosis is acute suppurative appendicitis.

SUMMARY

Some of the various causes for intra-abdominal calcareous deposits are presented. Those of especial importance are enumerated in reference to clinical and surgical significance. There are additional causes for abdominal calcifications, such as vascular plaques, phleboliths, lymph nodes and appendices epiploicae. However, these are not associated with a possible acute surgical abdomen with ileus. A pertinent case report of fecal lithiasis of the appendix, causing acute suppuration, has been presented. It thus becomes much more important to remove an appendix containing stones than it is to remove a gallbladder containing stones. An acute perforation of the appendix is usually imminent, while rupture is an unusual complication of gallbladder disease.

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There is much evidence that the immunity resulting from primary infection in childhood is bought at a great price. The risks that it entails are not small, since tuberculosis infections that remain latent during the early years of life may flare up in the form of overt disease after puberty.—*Rene' Dubos, Am. Rev. Tuberc., Aug. 1956.*

Medicine and music are universally conceded to be international languages. Perhaps there are many more. The experience of the lawyers compares with our experience as physicians, in that it reveals an unquenchable determination among men of every land and language to assert the dignity of the individual, his inviolable rights to freedom of action, and the subordination of government to those rights.—*World Med. J., May 1956.*

Angina Pectoris Treatment Improves in Last 30 Years—One generation ago the diagnosis of angina pectoris was almost a death sentence; in 30 years it may be a rare condition, a New York cardiologist said recently.

Angina pectoris, a severe pain in the chest which sometimes carries with it a feeling of suffocation and a fear of impending death, is one of the most painful effects of coronary artery disease. Arteriosclerosis produces a narrowing of the arteries of the heart which reduces the normal flow of the blood through the heart. Effort or excitement may cause spasms in the heart arteries which then produce pain.

In a signed editorial in the December 22 *Journal of the American Medical Association*, Dr. Arthur M. Master of Mount Sinai Hospital said there have been many improvements in the treatment of angina pectoris, but the major change has been one of approach to the condition. It is now realized that arteriosclerosis is a disease like any other and is not an inevitable process of aging. As a result there has been an unparalleled surge of research, and a more optimistic outlook has developed among physicians and patients with angina.

Thirty years ago the severe pain that the patient suffered, the little understood prevention of anginal pain and the condition's inadequate treatment engendered fears that could not be dispelled, he said.

The agonizing dread then associated with angina resulted largely from the existing economic and psychological factors. A man did not dare be absent from work or he would lose his job, so he ignored the pain and kept working, thus delaying diagnosis and treatment. The late diagnosis and "almost universal inadequacy of treatment" gave the impression that angina pectoris was totally and permanently disabling.

However, since then the entire approach to prevention and treatment has improved. Now nitroglycerin is given to prevent the pain, not just to stop it once it begins. Formerly as a last resort, some patients underwent thyroid gland surgery. Now similar effects may be obtained by using radioactive iodine. Moderate use of tobacco is no longer banned. With the improved techniques in anesthesia and surgery, patients can now undergo most major operations with safety. And they can even take plane trips, because of the development of pressurized airplane cabins and anti-motion sickness drugs.

The designation of coronary disease and angina is no longer a stigma, Dr. Master said. Its presence generates caution, but not panic. Lighter work is now available for persons with heart disease. Unreasonable fear of heart trouble is on the wane, and people are no longer afraid to be seen leaving a cardiologist's office. In fact, "to discuss one's electrocardiogram is as acceptable as to discuss one's analyst," he said.

However, until a specific prevention and treatment of coronary artery disease, and in turn angina pectoris, has been developed, general measures aimed at keeping the patient comfortable, at a reasonable weight, and free from tension remain of great importance.

A. M. A. Hears of Doctors' Plight in Hungary—

A letter received by the American Medical Association from the American Medical Society in Vienna describes the hardships of Hungarian physicians who are fleeing their homeland by the hundreds.

The letter to the A. M. A. was written by Dr. M. Arthur Kline, executive secretary of the American Medical Society. Dr. Kline, a native of Boston, was graduated from Harvard and went to Vienna on a fellowship from Harvard before World War II.

He wrote the letter only a few hours after receiving a \$5,000 draft from the American Medical Association to aid Hungarian physician refugees in Austria. The money was sent by the A. M. A. Board of Trustees on the last day of the A. M. A. Clinical Session in Seattle Nov. 27-30.

Within 24 hours after the money was cabled a message was received by the A. M. A. House of Delegates in Seattle. It expressed "profound thanks" to "every member of the House of Delegates from the 300 Hungarian refugee doctors now in Austria."

Then in a few days came a lengthy letter from Dr. Kline in which he told this story of a doctor's life during the revolution in Hungary:

"Every hour reports are being received in Vienna, telling us of the constantly increasing number of doctors who are escaping across the border and applying for refugee status in Austria. The reason for this panic-stricken flight is that the A. V. O. (Hungarian Gestapo or Secret Police) are arresting all doctors in Hungary who have treated injured Revolutionaries and who did not report the details, as required by law."

It was of course impossible for the doctors to do this, the letter explained, because "the number of injured was so numerous that most of the doctors worked around the clock, trying to cope with the catastrophe." Dr. Kline's letter added:

"Practically every doctor in Vienna has opened his home to a Hungarian colleague and his family. In almost all cases, the Hungarian physicians crossed the border penniless and with their families. In many instances, they carried their small children in their arms for distances up to 200 miles

"In addition to offering their homes, the Austrian doctors have all responded to our appeal by raising approximately \$8,000 to meet expenses in caring for our unfortunate colleagues. Considering the average income of the Austrian physician, this sum constitutes a tremendous sacrifice. Each Hungarian doctor receives the sum of 500 shillings (approximately \$20) when he first registers with us in Vienna. Our \$8,000 was exhausted over two weeks ago.

"Medicine is a proud profession and we should particularly care for our colleagues. The great majority of Hungarian refugees are workers and laborers and, as such, they will experience little difficulty in finding work. The doctors, however, most of whom speak only Hungarian, are naturally tremendously handicapped because of language and regulation difficulties. It seems that we shall be required to assist them for many weeks or perhaps months to come."

With that statement, Dr. Kline appealed for American contributions. His address is: Dr. M. Arthur Kline, Executive Secretary, The American Medical Society, 11 Universitätsstrasse, Vienna 1, Austria.

Hypnosis May Solve Some Anesthetic Problems—Hypnosis, not now recommended for general use as an anesthetic, may solve some special anesthetic problems, according to three Dallas, Texas researchers who have used it in several unusual cases.

They reported using hypnosis for delivery of a baby when the mother was a polio victim, for a dental procedure in a woman sensitive to chemical anesthetics, and in three other special cases.

Harold B. Crasilneck, Ph. D., James E. McCranie, M. D., and M. T. Jenkins, M. D., reported their cases in the December 29 Journal of the American Medical Association.

They said they have been investigating hypnosis for anesthesia for three years. They have found it useful under these special conditions:

- 1) when chemical anesthesia or depressants may be dangerous because of respiratory or heart disease;
- 2) when a patient is sensitive to regular chemical agents;
- 3) when repeated use of anesthetics weakens a patient who is already physically disturbed;
- 4) among patients whose fear of general anesthesia is so great it presents serious risks;
- 5) when the cooperation of the patient may be needed during surgery; and
- 6) when the procedure may be so lengthy that general anesthesia may be too weakening.

Use of hypnosis presented no difficulty in the delivery of a pregnant woman suffering polio, or in several dental procedures—lasting about two hours each—in a woman who suffered swelling of the face and body, hives, and nausea from general anesthesia.

In the third case, a 14-year-old girl who had suffered epileptic convulsions after a head injury was scheduled for a brain operation. However, the physicians needed to take electric wave-pattern tests of the brain during surgery, which might have been distorted by anesthesia. Hypnosis was used because it would not interfere with the tests.

During most of the operation this patient was "relaxed and comfortable," although she complained of mild pain at one point in the nine-hour procedure. An interesting fact was that the patient suddenly awoke from the hypnotic state when a certain part of the brain was touched.

This led researchers to "considerable interest and speculation" as to the part played by the nervous system in hypnosis, and "opens another avenue for investigation," they said.

Another use of hypnosis was on a man who became more and more fearful of anesthesia after numerous changes of dressing and other procedures for severe burns. An extensive procedure was done under hypnosis and the patient also felt no pain afterwards.

The final case was that of a woman who needed a pelvic examination for diagnosis, but who refused it because of an emotional difficulty.



Editorials

THE RESULTS OF MIDNIGHT OIL

With this issue there comes into being a new section of the *Journal*—the Organization Section. It did not come about by chance. It has grown out of a need to keep the members of the Association informed of the work that is being done by individuals and the Board and committees of the Association.

Prior to the annual session last April, the oil supply for the midnight lamps of your Committee on Medical Service and Public Relations ran low. The workings of your Association and annual sessions were combed through with very fine teeth. The dissemination of information was examined critically.

What caused this self-analysis? Several factors were involved. First, for some time your committee had recognized the fact that organized medicine is made up of individuals and that those individuals must be kept informed to make effective the organization through which they work. Second, the growing complexity of the problems confronting organized medicine seemed to call for a maximum efficiency that might be attained by personnel employed to concentrate on the handling of these phases of the problems which call for non-scientific training. Third, and certainly not the least important, was the putting together of remarks that were made by various members of the Medical Association of the State of Alabama. Some of those members who have been active in the affairs of the Association for many years, and who have worked hard, were heard to express the opinion that the younger doctors were not actively interested in the organization and its work. Some of the younger doctors were heard to express the opinion that the Association was controlled by a clique and that it was hard to gain acceptance into that clique. Your Committee on Medical Serv-

ice and Public Relations knew that neither of these opinions was justified, but it also knew that the individuals who made them were sincere in their beliefs; hence, the self-examination.

When the governing body of your Association decided last April to accept the recommendations of the Committee on Medical Service and Public Relations, it created the office of executive secretary. Since that time, some of the functions that had been handled by the constitutional secretary-treasurer have been transferred by him to the executive secretary's offices. Where and how the clerical work of the Association is handled would not seem of great interest to the average member, but it is felt that you should know how your organization operates. The rolls of the Association have been transferred to the executive secretary's office, and his staff has been given the responsibility of maintaining them. In addition to keeping names, addresses and other pertinent data posted, this includes the collecting and recording of State and A. M. A. dues for the approximate 2000 members, as well as publishing the roster. The handling of advertising and the mailing list for the *Journal* has been given to the executive secretary's staff. All correspondence, insertion orders, and plates for *Journal* advertising are received and the makeup of that section is handled by the executive secretary's office. These are the principal duties that the newly created office has thus far been able to handle for your constitutional secretary-treasurer.

There is another phase of the expanded program of your Association in which every member should be vitally interested. The recommendations approved last April include a study of existing committees, reactivation of needed ones, elimination of unnecessary ones, and addition of indicated new ones. This program is still in progress, but it has advanced to the stage where all

of the essential work is being done, and many of those things that are only desirable are being accomplished. Committee membership has been expanded to include many more interested members of the Association than have heretofore served. The work of the majority of these committees will be motivated at the county level. This is as it should be. It is in the County Society where members have an opportunity to work out the problems and the projects in which they are interested. However, the work must be coordinated at the state level. The reports, recommendations, and opinions from the sixty-seven county units must be brought together and made into one plan, recommendation, or opinion. The fact that members should be informed of what is taking place in committee and board meetings is recognized.

PR Notes are issued from the office of the executive secretary once each month, with interim issues sent out as needed. Work on Medicare has called for a number of extra issues. When Congress and the State Legislature convene this year, there will be several more. These Notes keep you posted on urgent matters that might require your immediate attention.

Self-examination has lead to the belief that information concerning the plans and accomplishments of the component parts of the organization is not reaching members of the Association. It is further believed that an informed member is an interested member and that an informed group is an active group. In a recent discussion of the purpose of the *Journal*, your Editor summed up the expressions of the individual members of the group by saying, "It is a medium for the members to express themselves to the Association, a medium for the Association to express itself to the members, and a medium for advertisers to display their products." The second of these mediums seemed to be lacking in the *Alabama Journal*. The Organization Section has been created to fill that need.

**AMERICAN COLLEGE OF SURGEONS
SECTIONAL MEETING
NEW ORLEANS, FEB. 4-7**

More than 2,000 surgeons, surgical specialists, nurses and related medical personnel from Canada and the United States are expected to attend a comprehensive four-day sectional meeting of the American

College of Surgeons in New Orleans, Louisiana, February 4 through 7, at Hotels Roosevelt and Jung. Dr. Howard Mahorner, Clinical Professor at Louisiana State University School of Medicine, and Director, Mahorner Clinic, is Chairman of the local Advisory Committee on Arrangements, and Sister Henrietta, Director, Department of Nursing, Louisiana State University School of Medicine, is Chairman of the Nurses' Advisory Planning and Arrangements Committee for the nurses' program. The meeting is not limited to college members but is open to all physicians.

In length and scope this scientific meeting will approach that of the annual Clinical Congress of the College. The program includes panel discussions, symposia, scientific papers, cine clinic films in general surgery, and separate programs in the specialties of urology, ophthalmology, obstetrics-gynecology, otolaryngology, thoracic surgery, and orthopedic surgery. Clinics will be held at Charity Hospital of Louisiana, Eye, Ear, Nose and Throat Hospital, Hotel Dieu, Mercy Hospital—Soniata Memorial, Ochsner Foundation Hospital, Southern Baptist Hospital, Touro Infirmary, and Veterans Administration Hospital.

The joint nurses' program, inaugurated with great success in Cleveland in 1955, and continued in Philadelphia in 1956, will include discussions on the health team in action in surgery of the lung, care of patients with burns, care of aged surgical patients, immediate postoperative care, problem clinic on recovery rooms, and care of thoracic surgery patients. Prominent surgeons and nurses will be guest speakers. The nurses' program has been planned in cooperation with representatives of the national and local units of the American Nurses Association, American Hospital Association, National League for Nursing, Veterans Administration, Louisiana State University School of Medicine, and leading New Orleans Clinics and Hospitals.

The Louisiana Chapter of the College invites all registrants to the dinner meeting on Sunday, February 3, at which James T. Priestley, Rochester, Minnesota, is the guest speaker. Dr. R. Gordon Holcombe, Jr., President of the Louisiana Chapter, will preside.

Dr. Joseph M. Donald, Birmingham, will preside at the Wednesday morning's session.

Other participants from Alabama will be Drs. Champ Lyons and Sterling Edwards, Birmingham, and Dr. E. Crampton Harris, Jr., Mobile.

HOW TO BE MORE POPULAR WITH YOUR PATIENTS!

Most people like their doctors and are generally satisfied with medical service. But the public offers some definite suggestions for ways doctors might improve the doctor-patient relationship.

These suggestions came to light when results of a nationwide survey done by a market research firm for the American Medical Association were tabulated. Heading the list of suggestions for doctors was "be available, come when called." This desire that a doctor be available when needed is not news to the medical profession, whose members have been working for the last five or six years to blanket the country with 'round-the-clock emergency call systems and similar informal arrangements to guarantee that availability.

Second suggestion from the public is "charge lower fees." Doctors have long suspected that most of the profession's public relations problems arise from the economic side of medicine. Yet in the survey individual doctors' charges receive only moderate criticism by the public. The public is by no means as critical of doctor bills as it is of other costs of medical care, such as hospital and drug bills. Almost five times as many people (41%) say hospital bills have risen the fastest since World War II as say doctors' bills have (9%). Almost four times as many (32%) mention drug bills as having increased with the greatest speed.

People want doctors to take more personal interest in them and be more friendly and sociable, the survey showed. Assembly-line medicine, where patients are rushed through in an impersonal manner, is not what the average American is seeking in his own physician.

Closer adherence to appointment schedules is also suggested by the public who express annoyance at unreasonable waits to see their doctors. People also want doctors to be honest and frank with them in regard to illnesses and fees. They also think doctors ought to assume more responsibility for informing the public about med-

icine as a part of their efforts to get along better with the public.

LIPOPROTEIN LIPASE DEFICIENCY

New evidence from the heart research laboratories of the Public Health Service indicates that hyperlipemia, a condition of excess fats in the blood, may result from deficiency of an enzyme, lipoprotein lipase, which normally acts to break down blood fats.

Dr. Richard J. Havel, of the Public Health Service's National Heart Institute, found evidence suggesting an inborn deficiency of lipoprotein lipase in three brothers with hyperlipemia studied at the research hospital of the National Institutes of Health in Bethesda, Maryland. Dr. Havel presented his findings at an international scientific meeting on organic fats held July 26 in Brussels, Belgium.

Lipoprotein lipase has been shown in earlier Heart Institute studies to aid in normal fat transport by breaking down the large fatty particles, which enter the blood from digested food, into smaller particles which can then be utilized by body cells. The presence in the blood of abnormal quantities of the larger fatty particles is known to be associated with disease states which lead to atherosclerosis, chief cause of death in the United States. Hyperlipemia is one of several such disease states. Its victims may develop atherosclerosis and coronary disease if they are not treated.

In the three brothers with hyperlipemia, Dr. Havel found that fats eaten in a single meal lingered in the circulation for as long as two days. In normal persons dietary fats are broken down and removed from the blood within eight hours after eating.

Injections of heparin, an anti-clotting drug, are known to speed the removal of dietary fats from the blood of normal persons by activating lipoprotein lipase. Dr. Havel found that heparin injections had little or no effect on the "creamy" blood plasma of the three hyperlipemic brothers.

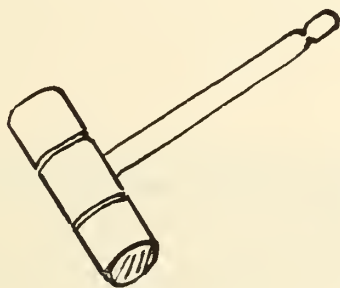
These findings alone pointed to a probable deficiency of lipoprotein lipase, but left open the possibility that the fat particles themselves might be abnormal in these patients—that these particles might simply be resisting the action of the enzyme.

To test this possibility, Dr. Havel trans-

fused plasma from one of the brothers into another brother and into a healthy volunteer. In the healthy volunteer half of the transfused fat was removed in seventeen minutes, and this time was shortened to eight minutes by heparin injections. In the hyperlipemic brother only half of the transfused fat was removed after eighty-five minutes, and rate of removal was not affected by heparin.

Dr. Havel also investigated effects of protamine, which slows the action of lipoprotein lipase. He found that protamine had no effect on the transfused fats in the hyperlipemic brother, though it greatly slowed their removal from the blood of the healthy volunteer.

"It is clear," Dr. Havel explained, "that the hyperlipemic subjects have a strikingly decreased ability to remove chylomicrons (the largest fatty particles) from blood plasma and that this defect does not result from an intrinsic abnormality of their chylomicrons. It is also clear that these individuals liberate very little lipoprotein lipase into their plasma after administration of heparin. The simplest explanation for these observations is that the subjects studied have a congenital deficiency of tissue lipoprotein lipase. While this hypothesis remains unproved, the findings provide further evidence that lipoprotein lipase participates in chylomicron transport and suggest that lipoprotein lipase deficiency may be one cause of unexplained hyperlipemia."



President's Page

OEDIPUS COMPLEX

In Sophocles' play "Oedipus, The King" the action begins with a serious conversation between one of the Arch Prophets of Zeus and Laius, King of Thebes. The Prophet is telling Laius that his wife, the Queen of Thebes, is pregnant with male child and that this son when he grows to manhood will kill his father, Laius, and marry his mother, Jocasta.

This story greatly disturbed Laius and especially so since Zeus had sent the message by such a great prophet. Laius confided this bad news to the Queen, but to no one else.

A lovely child was born to Jocasta in due time. When the child was three days old, Laius, as had been agreed between Laius and Jocasta, bound the child's feet with a cord and gave it to one of his most trusted house servants with instructions to place the child on the top of a certain high mountain to be left there to die. The servant, however, could not persuade himself to leave such a lovely child on a mountain top to die, and as he wandered from place to place

with the child in his arm, he met an old friend. This friend was a servant of the King and Queen of Corinth and he agreed to take the child to Corinth. When the King and Queen of Corinth saw the child they were pleased and, since they had no children and no prospect, decided to adopt the child and since its feet were tied to name it Oedipus.

Things went well both in Thebes and in Corinth for many years; but one night at a royal party, a gentleman, who had too much wine and was jealous of the popularity of the Crown Prince, Oedipus, told Oedipus that he was not the son of the King and Queen but that his real father was a house servant in the royal palace.

This greatly disturbed Oedipus and after failing to receive a satisfactory answer from the King and Queen, he went to Delphi to consult the Oracle. The Oracle informed Oedipus that he would murder his father and marry his mother. This so greatly disturbed Oedipus that he decided never to return to Corinth.

At this time the "Riddle of the Sphinx"

had the people of Thebes in a great state of agitation. So greatly were the people disturbed that King Laius with several body guards decided to visit the Oracles at Delphi for aid in solving the riddle.

After leaving Delphi, Oedipus met Laius and his party where the road forked three ways. A fight ensued and Laius and his body guards were slain by Oedipus, except one who escaped into the woods.

After this, as Oedipus wandered from place to place he came to Thebes and there solved the "Riddle of the Sphinx." The people of Thebes were so grateful to Oedipus for releasing the country from the fury and destruction of the Sphinx, he was immediately proclaimed King of Thebes. As King he courted and married the former queen, Jocasta. Jocasta bore him four children—two sons and two daughters.

At last a great calamity came upon

Thebes. The grass would not grow in the fields, and the women, even young women, could not conceive.

Many prophets were consulted and finally a blind prophet disclosed to Oedipus his true story—that Laius and Jocasta were his real parents—that the King and Queen of Corinth were his foster parents—that he had slain Laius, his father, where the road forked three ways and had married his mother, Jocasta.

The word Oedipus literally translated means "tied feet," but from that day to this, when followed by the word complex, means the abnormal love of a son for his mother—a love above and beyond the call of filial duty.

Grady O. Segrest



ORGANIZATION SECTION

This is the news of your Association. It is a new section of the *Journal* created for the purpose of keeping you informed of the plans and accomplishments of the governing body and the committees of your Association.

Much has occurred since the last annual meeting. It is hoped that before the Association meets again in April of this year, it will be possible to give you a clear picture of just what is being done to implement the various phases of the Association's program.

It is believed that the information you will gain from reading reports on the work of the various committees and the Board of your Association will enable you to perform your own duties in the organization more effectively.

COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

The recommendations made by this committee to the annual session last April were approved. You may remember that these

recommendations included expanding the committee from ten to fifteen members. Subsequently thirteen subcommittees were set up. The membership of these was drawn from the full Association. The motivating thought behind this action was that such a program would bring into active participation a much greater number of interested members. Plans and accomplishments thus far attained indicate that the change in the program will prove good.

On May 20, the Committee on Medical Service and Public Relations met and outlined its work for the year. Thirteen of the fifteen members accepted chairmanships of subcommittees, leaving the Chairman and the Vice-Chairman free to direct the overall program. Since that date, the chairmen have selected doctors whom they believed to be interested in the work of a particular committee to serve with them. By this method, active participants in the work of the Committee on Medical Service and Public Relations have been increased from

last year's ten to a total of some sixty-five.

Each of the subcommittees works out its own program of activity; but its recommendations are presented to the Committee on Medical Service and Public Relations before action is taken. Some of the work already begun is described in succeeding paragraphs.

SUBCOMMITTEE ON SPEAKERS BUREAU

Working with Dr. Holley on this committee are Drs. William Simpson, John Burnum, Richard Harris and Irving Koffler. The title "Speakers Bureau" explains the committee's objective; however, implementing its work calls for the cooperation of many people.

The committee will work at the county level, requesting each county with a membership of ten or more members to set up a speakers bureau within its society. The bureau will be coordinated at the state level.

At the last meeting of the Committee on Medical Service and Public Relations, Dr. Holley presented a proposal for a pamphlet to be sent to lay organizations such as PTA's, luncheon clubs and civic groups. This pamphlet is now being given the final revisions and should be ready for distribution in the near future.

The committee envisions a program that will furnish a list of qualified speakers and that will keep lay organizations apprised of the availability of speakers and subjects. While some of the work on this program can be done at the state level, the majority of it must be accomplished in the counties by the smaller groups. You are urged to cooperate with your County Chairman and to make suggestions to your County Society on speakers, subjects, and lay organizations which might desire speakers.

SUBCOMMITTEE ON TV, RADIO, AND PRESS

Dr. Glenn's committee members are: Drs. Walter B. Frommeyer, John F. Jenkins, David G. Vesely, H. H. Hutchinson, and ex-officio members Mr. Steve Yates, Dr. Richard Eastwood, and Mr. Graydon Ausmus.

The committee's objectives are to help provide accurate information to the public on medical subjects and to instruct and advise the membership on how this is to be done.

This committee has submitted to the State Board of Censors for approval a set of guid-

ing principles for participation in telecasts and broadcasts. They are actually those used by the American Medical Association. As soon as this guide has received approval from the State Board of Censors, it will be distributed to radio and television stations and to County Societies. Also submitted to the Board is a statement of policy on publicity for guidance of local societies. It is suggested that you check with your County Chairman if you find opportunity to assist in the work of this committee in presenting accurate information to the public.

The committee has also presented to the Board of Censors for approval a proposal that the Association establish an annual award named in memory of one of Alabama's distinguished medical leaders. The award would be made for outstanding newspaper service in promoting reliable medical information and education for the public. It has been recommended that the Board set up a committee of at least five members which would select the recipient, two of these five to be representatives of the press.

The third proposal of the committee is that the State Association begin the immediate preparation of a series of one-minute TV spots around the theme, "Safeguard Your Health." Dr. Frommeyer of the University of Alabama Medical Center has accepted chairmanship of a subcommittee on this project, and Messrs. Ausmus and Yates are working with him. Considerable progress has been made toward the realization of this proposal.

These are the recommendations of the committee. As soon as approval is given and action taken, you will receive a report of that action in the columns of this section of the *Journal*.

SUBCOMMITTEE ON CLOSER LIAISON WITH FARM BUREAU AND EXTENSION SERVICE

Dr. Nickerson's committee held a meeting on October 28, to which they invited representatives of the Farm Bureau, the A. P. I. Extension Service, and the Committee on Rural Health and Indigent Care of the Alabama Academy of General Practice. The purpose of the meeting was to explore and try to determine what mutual problems there are within the farm and medical groups and what might be done to help answer those problems. Drs. R. P. Stock, W. A. Edwards, Frank Stitt, and J. E. Foster

are working with Dr. Nickerson on his committee.

The problems facing this group are far-reaching and it is to be expected that time will be needed in which to make their efforts effective. The committee is considering such problems as providing accessible medical service for rural areas, correcting the mid-wife situation, improving the pre-school and school examinations, improving immunization in rural areas, and urging that rural residents have a family or personal physician and that they have a yearly physical examination.

This committee has taken definite steps in the direction of attaining its goal. The first of these was to decide on the appointment of at least one physician in each county as a contact man with the County Farm Bureau. The second step is the assembling of needed information on facilities that are available in rural areas. The third step will be the setting up of a Farm Bureau Committee to work with the subcommittee of the Medical Association. Mr. Walter Randolph stated at the October meeting that in his estimation the Farm Bureau would be quite willing to do this.

This program, like the majority of the other programs that reach out to every member of the Association, will necessarily be handled at the county level and be coordinated at the state level. When the call for cooperation comes, you will know that much study and work has gone into the proposed plans. Your help will be needed to materialize them.

SUBCOMMITTEE ON MECHANISM OF ANNUAL SESSIONS

The project originally undertaken by this committee has been completed. Dr. S. W. Windham acted as chairman until he was made an ex-officio member of the Committee on Medical Service and Public Relations by virtue of being a vice-president of the Association. Dr. Colley assumed the duties of chairman when Dr. Windham moved to his other position on the parent committee. Serving with Dr. Colley are Drs. Hubert B. Strickland, Jr., James R. Shell, and George Johnson.

Your Committee on Medical Service and Public Relations made recommendations to the Annual Session in April 1956 for some changes in the mechanism of these sessions. These recommendations were brought about by a careful study of procedures then

in use. The study lead to the conclusion that the Counsellors and Delegates were not receiving reports and recommendations in time to digest them before they were called upon to vote.

To bring about certain changes in the operation of the annual sessions, it will be necessary to effect changes in the by-laws of the Association. The proposed changes have been submitted to the Committee on Revision of the Constitution.

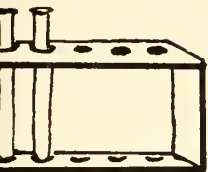
Some of the recommendations of this committee have been made for the purpose of clarification; no change in the procedure heretofore followed has been proposed.

The context of this committee's report is not being printed in these pages; however, the recommendations of the committee on Revision of the Constitution will be disseminated well in advance of the 1957 Annual Session. It is suggested that you keep in close touch with your County Society in order that you may be well informed on the questions that will come before the Annual Session.

At the October 21 meeting of the Committee on Medical Service and Public Relations it was decided to consider instituting a series of medical assistant's courses. In view of the fact that the work on the mechanism of annual sessions had been completed, this program was assigned to Dr. Colley's committee.

Of the biological factors involved in the etiology of tuberculosis, nutrition is perhaps the most important. Even before the discovery of the tubercle bacillus the value of a liberal diet in the treatment of tuberculosis was generally recognized. And, conversely, the association of phthisis with malnutrition was apparent. Complete proof of the role of malnutrition in tuberculosis is still lacking but the evidence is convincing.—*Alton S. Pope, M. D., and John E. Gordon, M. D., Am. J. Med. Sciences, September 1955.*

However successful our treatment of tuberculosis in children and young adults may be, unless we control the disease in the higher age groups we shall be a long time reducing the incidence of the disease in the population. The active cases in elderly men and women are going to form the hard core of infection in the community that may give rise to local epidemics of acute cases among the young contacts. It behooves us, therefore, to discover, treat, and if necessary isolate these dangerous old men and women and to do all we can to protect our children and young adults from the risks to which they are exposed.—*F. R. G. Heaf, M. D., J. Royal Inst. Pub. Health and Hygiene, November 1955.*



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

SAFE AT HOME?

By

Martha Terry, Director

Division of Public Health Education

Through the years, the word "home" has come to have a special meaning in our language. It means more than just the place one lives. Among other things, it has been called man's castle, or his refuge, or a haven where he is safe from all harm.

But are our homes safe? The National Safety Council would hardly agree. According to their records, there are approximately 28,000 deaths due to home accidents annually in this country. Of this number, over 12,000 are children. In addition, home accidents cause about 4,200,000 non-fatal injuries each year. Over 2,000,000 of these injured are children, and some 40,000 to 50,000 of them are permanently injured.

Let's bring some of these figures closer to home: During the first six months of last year, there were 285 deaths from home accidents in Alabama. One-third—95—of Alabama's home accident victims were children under 15 years of age. These are the deaths. And for every child who died as a result of a home accident, there were others who were injured with varying degrees of severity. Some of them were permanently crippled or marked. Accidents cripple more children than do the dread diseases such as polio or rheumatic heart disease. The home, which should be the safest place in the world for a growing child, appears, in the light of our statistics, to be as dangerous as the most heavily traveled thoroughfare.

The over-all safety of our children is a community problem, and it is one which demands our respect and attention. In the final analysis, however, major responsibility for safety in the home lies with parents.

It is up to them to make the home as accident proof as possible.

Careful consideration of the types of home accidents to which our children fall victims will almost immediately suggest preventive measures to every parent. The fatal accidents which are reported with appalling regularity are fires and explosions . . . suffocation . . . poisoning . . . firearms . . . falls.

The 30 Alabama children who died in home fires and explosions in the first six months of 1956 might have been saved, if If small children were never left unattended If matches were always stored safely out of reach If combustible materials such as oil-soaked rags and newspapers were never allowed to accumulate If adults made sure that gas and electrical appliances, oil stoves and coal burning stoves were kept in good working order If those same adults regularly looked for and removed the fire hazards which may be found in almost any home.

The 27 small victims of suffocation might be living today. They might be, if infants always slept alone, if their coverings were always secured so their heads could not get entangled, if there were always sufficient ventilation when heaters, especially space type gas heaters, were left on at night, if doors were always removed from abandoned ice boxes.

Eleven more might have been saved from death by poisoning. Suppose that medicines and household poisons had been clearly labeled, then locked away from curious little ones. Suppose, again, that small children were not left too much to their own devices, and that parents learned ahead of time what to do in case of poisoning.

What if the guns really had not been loaded when our seven Alabama children died from accidents with firearms from January through June last year? Or better yet, what if the firearms had been put out of children's reach, if children knew that guns are

not playthings, if every adult handled firearms with the respect that is due them?

And there were the three who died from falls. They too might be living if the windows of their homes had had strong, tightly fastened screens, or if floors had not been too highly waxed and polished, or if proper play equipment had been provided, or if there had been safe play areas with adequate supervision of play.

And what of the 17 who died in accidents of unspecified type? It is highly probable that some of them would still be with us if proper safety measures had been taken. For accidents don't just happen. In most cases they happen because we didn't think—we didn't think ahead.

Yes, accident-proofed homes might have saved some of our 95 children. Sadly enough, accident-proofed homes probably couldn't have saved all of them. Accident prevention can go a long way toward saving our children. We can and must protect them by applying all the preventive measures at our command. By itself, that is not enough. We must go farther than that, and attempt to accident-proof the children themselves.

As our children grow older they are out of the home more, and they encounter situations which are beyond our control. We have to train our children to cope with such situations alone. And we do not want to so over-protect our children that we retard their emotional growth. We want them to become self-reliant. In terms of accident prevention, this calls for safety education.

The infant and the very young child, of course, require total protection. They are helpless in our hands, and if they are burned, or fall, or are poisoned, we are at fault. To insure their safety, we can limit their freedom of movement. We can avoid giving them anything that may be injurious. For instance, we put them in the play pen when we're cooking dinner, we don't leave them where they can fall off the bed, we try to make sure we're giving the right medicine—and that as the doctor prescribes.

As the child grows and develops, we need to supplement this protection with education. And, the older he gets, the more we have to rely on the effectiveness of such education.

How do we go about this process of safety

education? Probably the best means available to most of us is the use of example as well as precept. Children aren't called great imitators for nothing. They take us as their models, they do what they see us doing, they absorb our attitudes. If we habitually disregard reasonable safety measures, if we pick the fastest, easiest way instead of the safe way, if, in short, we ignore the very things we're trying to teach our children, it's a pretty safe bet they'll do what we do—not what we say do. The mother who saves a few minutes by standing on an unsteady chair instead of getting the stepladder when she needs something off the top shelves should not be surprised if her child does the same thing. The parent who smokes in bed or is careless in disposing of lighted cigarettes and matches cannot reasonably expect his child to exercise care where fire is concerned.

We can make our children safety conscious—without making them over-fearful. The child's natural curiosity is a great help here. We can take the time to show him how the heater works and explain why it is dangerous. He's really interested. We can be as resourceful as the mother whose little boy was fascinated by matches. No matter where she stored them he managed to find them. One windless day she put him down in the middle of the paved driveway and handed him a big box of matches, telling him to strike every match. She stayed with him while he did. His curiosity was satisfied and he was pretty tired of matches before the box was empty. And if the flame got a little too close to his fingers, he got a small taste of what fire can do. We can teach our children what to do in case of fire—even have family fire drills.

If there's a boy in the family who's interested in guns and hunting we can see that someone teaches him to use a gun safely. And we can make sure that such training includes information about cleaning and storing the gun, and not pointing it at living things, even in jest.

We can make use of the every-day, minor accidents which will always be a part of normal childhood. For instance, if your toddler sticks himself with a pin—which he shouldn't have, in the first place—help him make the connection between the pain he felt and the word "sharp." The opportunities are never lacking—we have to learn to see and make use of them.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

September 1956

Examinations for diphtheria bacilli and Vincent's.....	111
Agglutination tests.....	716
Typhoid cultures (blood, feces and urine).....	682
Brucella cultures.....	10
Examinations for malaria.....	78
Examinations for intestinal parasites.....	2,586
Darkfield examinations.....	7
Serologic tests for syphilis (blood and spinal fluid).....	23,698
Examinations for gonococci.....	1,317
Examinations for tubercle bacilli.....	3,117
Examinations for Negri bodies.....	95
Water examinations.....	1,873
Milk and dairy products examinations.....	4,809
Miscellaneous examinations.....	555
Total.....	39,654

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	Aug.	Sept.	E. E.* Sept.
Typhoid and paratyphoid.....	5	5	7
Undulant fever.....	1	2	3
Meningitis.....	10	6	8
Scarlet fever.....	235	293	29
Whooping cough.....	54	33	29
Diphtheria.....	2	2	33
Tetanus.....	2	3	4
Tuberculosis.....	186	160	218
Tularemia.....	0	0	0
Amebic dysentery.....	3	2	1
Malaria.....	0	0	8
Influenza.....	87	81	43
Smallpox.....	0	0	0
Measles.....	120	64	22
Poliomyelitis.....	23	11	48
Encephalitis.....	1	3	2
Chickenpox.....	6	6	3
Typhus fever.....	2	3	3
Mumps.....	65	58	26
Cancer.....	372	396	370
Pellagra.....	0	0	1
Pneumonia.....	80	105	74
Syphilis.....	111	85	278
Chancroid.....	3	6	11
Gonorrhea.....	400	416	395
Rabies—Human cases.....	0	0	0
Positive animal heads.....	28	31	0

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October 1956

Examinations for diphtheria bacilli and Vincent's.....	384
Agglutination tests.....	709
Typhoid cultures (blood, feces and urine).....	658
Brucella cultures.....	6
Examinations for malaria.....	75
Examinations for intestinal parasites.....	3,069
Darkfield examinations.....	7
Serologic tests for syphilis (blood and spinal fluid).....	24,390
Examinations for gonococci.....	1,537
Examinations for tubercle bacilli.....	3,768
Examinations for Negri bodies.....	108
Water examinations.....	1,926
Milk and dairy products examinations.....	5,327
Miscellaneous examinations.....	495
Total.....	42,459

	Sept.	Oct.	E. E.* Oct.
Typhoid and paratyphoid.....	5	5	4
Undulant fever.....	2	1	2
Meningitis.....	6	9	6
Scarlet fever.....	293	227	61
Whooping cough.....	33	24	40
Diphtheria.....	2	25	59
Tetanus.....	3	3	4
Tuberculosis.....	160	168	233
Tularemia.....	0	0	1
Amebic dysentery.....	2	3	2
Malaria.....	0	0	4
Influenza.....	81	30	69
Smallpox.....	0	0	0
Measles.....	64	135	35
Poliomyelitis.....	11	22	30
Encephalitis.....	3	4	1
Chickenpox.....	6	5	13
Typhus fever.....	3	1	5
Mumps.....	58	65	23
Cancer.....	396	377	365
Pellagra.....	0	0	3
Pneumonia.....	105	145	102
Syphilis.....	85	115	316
Chancroid.....	6	1	12
Gonorrhea.....	416	313	413
Rabies—Human cases.....	0	0	0
Positive animal heads.....	31	21	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA
FOR JULY 1956

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During July 1956			Rates* (Annual Basis)		
	Total	White	Non-White	1956	1955	1954
Live births	7103	4521	2582	25.6	25.3	25.9
Deaths	2224	1390	834	8.0	7.5	8.2
Fetal deaths	172	78	94	23.6	20.2	23.7
Infant deaths—						
under one month	169	93	76	23.8	25.0	21.6
under one year	225	113	112	31.7	34.3	30.6
Causes of Death						
Tuberculosis, 001-019	23	14	9	8.3	10.5	12.9
Syphilis, 020-029	8	3	5	2.9	2.2	3.3
Dysentery, 045-048	2	1	1	0.7		0.7
Diphtheria, 055						0.4
Whooping cough, 056	2	1	1	0.7	1.1	0.4
Meningococcal infections, 057	1	1		0.4	0.7	1.1
Poliomyelitis, 080, 081					1.5	1.5
Measles, 085	1	1		0.4		0.7
Malignant neoplasms, 140-205	305	218	87	110.0	96.7	91.9
Diabetes mellitus, 260	28	21	7	10.1	8.4	10.3
Pellagra, 281	2	2		0.7	0.7	0.4
Vascular lesions of central nervous system, 330-334	301	168	133	108.5	99.2	121.2
Rheumatic fever, 400-402	2	1	1	0.7	0.7	2.9
Diseases of the heart, 410-443	718	484	234	258.9	231.8	249.1
Hypertension with heart disease, 440-443	136	57	79	49.0	47.6	55.8
Diseases of the arteries, 450-456	42	21	21	15.1	11.3	16.2
Influenza, 480-483	3	2	1	1.1	1.1	2.6
Pneumonia, all forms, 490-493	55	26	29	19.8	14.2	15.8
Bronchitis, 500-502	2	2		0.7	0.4	0.7
Appendicitis, 550-553	4	2	2	1.4	1.8	1.5
Intestinal obstruction and hernia, 560, 561, 570	20	14	6	7.2	4.4	4.8
Gastro-enteritis and colitis, under 2, 571.0, 764	12	3	9	4.3	7.3	7.3
Cirrhosis of liver, 581	11	8	3	4.0	2.9	4.0
Diseases of pregnancy and childbirth, 640-689	5	3	2	6.9	8.4	16.6
Congenital malformations, 750-759	30	25	5	4.8	4.7	5.1
Accidents, total, 800-962	177	120	57	63.8	42.3	62.8
Motor vehicle accidents, 810-835, 960	86	54	32	31.0	22.2	27.6
All other defined causes	400	214	186	144.2	150.1	153.3
Ill-defined and unknown causes, 780-793, 795	70	35	35	25.2	36.3	37.5

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA
FOR AUGUST 1956

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During August 1956			Rates* (Annual Basis)		
	Total	White	Non-White	1956	1955	1954
Live births	7705	4679	3026	27.8	28.0	23.0
Deaths	2218	1426	792	8.0	8.0	7.2
Fetal deaths	165	74	91	21.0	28.0	23.6
Infant deaths—						
under one month	157	93	64	20.4	22.6	23.0
under one year	208	111	97	27.0	29.0	29.1
Causes of Death						
Tuberculosis, 001-019	35	20	15	12.6	13.4	9.9
Syphilis, 020-029	5	1	4	1.8	1.8	1.5
Dysentery, 045-048	6	3	3	2.2	0.7	1.1
Diphtheria, 055					0.4	0.7
Meningococcal infections, 057					0.4	
Poliomyelitis, 080-081	3	2	1	1.1	0.7	2.6
Measles, 085						0.4
Malignant neoplasms, 140-205	272	201	71	98.1	113.7	91.5
Diabetes mellitus, 260	36	28	8	13.0	11.3	5.8
Pellagra, 281	2	1	1	0.7		0.7
Vascular lesions of central nervous system, 330-334	297	178	119	107.1	98.1	85.2
Rheumatic fever, 400-402	3	2	1	1.1	1.1	0.4
Diseases of the heart, 410-443	720	490	230	259.6	259.5	220.0
Hypertension with heart disease, 440-443	140	71	69	50.5	52.0	50.3
Diseases of the arteries, 450-456	53	30	23	19.1	17.1	12.5
Influenza, 480-483	5	4	1	1.8	0.4	
Pneumonia, all forms, 490-493	43	24	19	15.5	19.3	19.4
Bronchitis, 500-502	2		2	0.7		1.1
Appendicitis, 550-553	4	2	2	1.4	0.7	2.6
Intestinal obstruction and hernia, 560, 561, 570	10	8	2	3.6	1.8	4.0
Gastro-enteritis and colitis, under 2, 571.0, 764	17	4	13	6.1	5.1	4.8
Cirrhosis of liver, 581	17	12	5	6.1	4.7	3.3
Diseases of pregnancy and childbirth, 640-689	4	1	3	5.1	8.9	14.1
Congenital malformations, 750-759	24	19	5	3.1	4.0	3.0
Accidents, total, 800-962	179	124	55	64.5	57.8	51.1
Motor vehicle accidents, 810-835, 960	95	68	27	34.2	25.1	25.0
All other defined causes	397	234	163	143.1	149.7	163.2
Ill-defined and unknown causes, 780-793, 795	84	38	46	30.3	32.3	25.7

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population.



BOOK REVIEWS

Vascular Surgery in World War II. Edited by Daniel E. Elkin, M. D., and Michael E. DeBakey, M. D. Prepared by the Historical Unit, Army Medical Service, under the direction of Col. Calvin H. Goddard, MC, AUS, formerly Editor-in-Chief. Buckram. Pp. 425. Price, \$4.25. For sale by Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 1955.

Vascular Surgery in World War II was edited by Daniel C. Elkin, M. D., and Michael E. DeBakey, M. D., two outstanding men in the field of vascular surgery. This volume is easy to read and well organized. Figures, diagrams, tables and charts are used for clarity.

Significant data concerning vascular injuries and disturbances were gathered from the military experiences in World War II, particularly because of the concentration of patients with these conditions into centers for specialized treatment. This unequalled wealth of clinical material gives a reasonably complete accounting of complications of battle-incurred vascular injuries evacuated to the Zone of Interior. It also gives an accounting of certain peripheral vascular disorders observed in Army personnel during World War II.

Methods of treatment and complications of acute battle-incurred arterial injuries are discussed in detail. Illustrative cases are presented.

Arterial aneurysms and arteriovenous fistulas are discussed as to pathogenesis, diagnosis, surgical treatment and postoperative results.

The use of anticoagulants and sympathectomy as adjunct measures in operative treatment of vascular disease is adequately discussed.

This treatise will be of great benefit to those who are treating, and who may be called upon to treat vascular injuries or disease.

Thos. S. Boozer, M. D.

The Medical Significance of Anxiety. By Richard L. Jenkins. Paper. Pp. 46. Price, \$1.00. Published by The Biological Science Foundation, Ltd., 1011 New Hampshire Ave., N. W., Washington 7, D. C.

All physicians, whether they practice in larger cities or small communities, constantly encounter anxiety in their patients. However, the capacity to deal with this problem is generally viewed by the average doctor as outside of or in addition to the real skill of medical competence.

The above is the opening message of this compact and brief booklet on the meaning of anxiety

for the practicing physician. The author then sets forth a great amount of evidence to support the position that doctors have every reason and justification for understanding anxiety and how it affects their medical practice. Eliminated from this treatise are all the frills of a lengthy exposition on the anxious patient. The author presents the essentials of the problem with such clarity and authority as to be of material help to the physician-reader in understanding anxiety and dealing with the disorder in its less extreme forms.

This booklet is divided into three parts. The first points out how much strong emotions play in the physical health of the patient. The second section deals with techniques the doctor can use in controlling the anxiety or tension level of his patient; and the third part of the booklet presents a theoretical explanation of what anxiety is and how it develops in a person. The first two parts are of much more value to the physician than the last, because the former are based upon documented facts rather than speculation.

No one can read this treatise and fail to be convinced about the need for the control of anxiety. Take, for example, these observations the author makes: There is unquestionable evidence that chronic anxiety or tension has a definite effect upon the reparative processes of the body. This particularly holds true for the diseases of internal organs, as the lungs, heart, stomach and intestine. Every doctor, the author points out, is aware of the damaging role that acute anxiety plays in the recovery of the tuberculosis patient and the individual suffering from a peptic ulcer. Anxiety usually works its damages through the autonomic nervous system. Chronic activity of the autonomic system appears to be the mechanism behind most of the psychosomatic disorders. For example, suppressed resentment, which is a result of conflict and is a cause of anxiety, appears to be an important causative factor in many cases of hypertension and of hyperfunction of the colon.

Now, what can the average doctor do to control the anxiety of his patient so that further damage to the body will be circumscribed? First, the physician should ascertain the degree of the patient's anxiousness (some aids are listed); next, he should get some sort of history of the disorder; then, he is better able to prescribe medication or make a referral to a psychiatrist or mental health clinic, or follow through with whatever is necessary for the patient's welfare.

This booklet is recommended for all physicians; it is a concise treatment of a problem—

anxiety—which doctors encounter daily. It cannot answer all questions about the anxious patient, nor does it present any sure-fire, easy-to-come-by techniques for the doctor in handling the situation. But it does put the physician on speaking acquaintance with the universal problem of anxiety.

John M. McKee, Ph. D.

Hand Surgery in World War II. Edited by Sterling Bunnell, M. D. Buckram. Pp. 447, illustrated. Price, \$3.75. For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

This volume deals with the problem of hand surgery in combat-injured hands suffered in World War II. Much knowledge was gained in the handling of these cases, and will be of great value should another similar emergency arrive.

Chapter 1 by Condict W. Cullen, Jr., discusses the progress in treatment of hand injuries and infection, between World War I and II.

An excellent resume' of the work on reconstruction of hands is given by Dr. Sterling Bunnell in Chapter 2.

An accounting of the experiences and activities in the Mediterranean and European theaters, and in the nine hospitals in the Zone of the Interior, are presented.

All phases in the care and management of the injured hand from the time of initial injury until rehabilitation are fully discussed.

Thos. S. Boozer, M. D.

Hypnotic Suggestion. Its Role in Psychoneurotic and Psychosomatic Disorders. By S. J. Van Pelt, M. D. Cloth. Price, \$2.75. Pp. 95. New York 16, N. Y.: Philosophical Library, 15 E. 40th Street, 1955.

This book is a short treatise on the treatment of psychoneurotic and psychosomatic disorders by modern hypnotherapy. Although the author appears to be directing some of the content toward the general medical practitioner, the book can best be appreciated by two specialists in the mental health field—psychiatrists and clinical psychologists. In fact, it would be quite erroneous, if not dangerous, for the average GP to assume that he is ready to administer hypnotherapy once he has read this book.

This is not said in an effort to discourage the reading of the book by all physicians, because it is highly informative: Facts are clearly and logically presented, and it represents a profound contribution to explanatory theories underlying hypnosis. The author speaks from a reservoir of vast experience in therapeutic hypnosis, and his observations reflect authoritative ness.

The modern treatment evolved by Dr. Van Pelt has nothing to do with the old-fashioned method of suppressing symptoms only by hypnotic suggestion. This has been rightly condemned. The practical methods in this book enable the clinician to get to the root cause of the trouble, using merely light hypnosis, which 95 per cent of people can achieve in a matter of

weeks, instead of years as with psychoanalysis.

In addition to the chapters on history, susceptibility, phenomena, and methods of inducing hypnosis, the author describes in detail his original theories of the hypnotic state, the etiology and mechanism of the psychoneuroses, and his own original methods of treatment.

Twelve detailed case histories, which include neurasthenia, anxiety neurosis, anxiety hysteria, hysteria, obsessional neurosis, reactive depression, insomnia, alcoholism, migraine, asthma, impotence, and also frigidity, illustrate all the essential points of diagnosis and treatment.

An ample bibliography and index increase the practical value of the book.

John M. McKee, Ph.D.

Sculptors' Tools Used in Planing—Tools used by sculptors to rough clay are now being used by doctors to smooth away acne scars.

The tools are forged steel rasps having a central handle with variously shaped toothed working surfaces at each end. They are available at most sculpture supply houses. Another rasp, sold as a "corn and callus" instrument by notion stores, is also used.

Their use is the latest development in dermabrasion (skin planing) in which acne, chickenpox, smallpox and shingles scars can be removed, or at least improved, by abrading the scarred areas. Earlier techniques used sandpaper or revolving wire brushes.

Dr. Douglas Torre, a New York dermatologist, described the new technique and its use on 24 patients in the December Archives of Dermatology, an American Medical Association publication.

While the new technique is slower and requires more work by the doctor than the wire-brush technique, it is simpler, cheaper and less subject to mishap, Dr. Torre said. It also has many advantages and none of the disadvantages of the sandpaper method.

In the new technique local anesthesia is injected into the area to be abraded. The rasps are used in a crisscross and circular motion. In the wire-brush method, the skin is "frozen" and then abraded with the motor-driven wire brush which is manipulated in short strokes. One advantage of the rasp method over the wire-brush technique is that the scarred area can be evaluated during the operation since the skin is not "frozen" by an anesthetic, he said.

The results in the 24 patients varied from an estimated 20 to 75 per cent improvement in appearance of the skin. One patient was treated by sandpaper, wire brush and rasp on different occasions with no "appreciable difference" in the end result.

On eight occasions the wire brush was used initially and the rasp was used later to even out the abraded area and shade off the edges. In fact, Dr. Torre said he usually uses both the rasp and wire brush, preferring the wire-brush technique when large areas are to be done, and the rasp for smaller areas and for "finishing off" after using the wire brush.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

February 1957

No. 8

THE DIAGNOSIS AND TREATMENT OF NUTRITIVE FAILURE TODAY

TOM D. SPIES, M. D.

Birmingham, Alabama

I have the honor to speak to you again on some studies which have been underway for over a quarter of a century.

From time to time I have said that, to be well, a man must eat properly, and that what he eats has much to do with his health and even with his recovery from ill health. Our goal has always been optimum nutrition, and although we have learned much about this desideratum, we do not yet know enough. Time and time again, I have pointed out to you that immeasurable burdens and tragedies arise from improper diets.

Deficiency diseases develop when a person or an animal becomes ill due to a lack of proper nutrients in his tissues. This may be due to failure to eat an adequate amount of proper food or from failure to absorb, assimilate, or utilize it properly. Medical attention often is required for correction and improvement of his diet, and frequently supplementation of nutrients is necessary.

Physicians frequently are asked, "Is my diet satisfactory? Am I well fed?" The physicians very properly are the guardians of the health of the people, but for the most part they cannot state with certainty that a person's diet is optimum without a great deal of study. It has been most unfortunate that many so-called authorities and committees have evaded responsibility by stating that, if one's diet is adequate, vitamins or other supplements are unnecessary. It

goes without saying that if the diet is *adequate*, nothing else is needed. Such advice, without careful consideration of facts, is very misleading.

We have fostered the concept that disease is primarily chemical and chemically correctible. The alarming food-population problems of the world are being logically considered. Already we have applied our knowledge of nutrition so as to stop the ravages of pellagra in our southland (see Figure 1) and to make endemic sprue and tropical anemias virtually nonexistent in Cuba and in Puerto Rico (see Figure 2).

In the years that we have worked together, we have reported to you a number of times on the clinical significance of the vitamins. A voluminous literature about these substances has accumulated. We have shown again and again that folic acid, thiamine, niacin, riboflavin, vitamin B₁₂, pyridoxine and pantothenic acid are constituents of the vitamin B group. Each of these B vitamins is an indispensable part of all living matter and functions universally in minute amounts in our tissues. They are distributed in our cells and in the cells of plants, animals and bacteria. The necessity of these substances for health and vigor should be self-evident. The necessity of these and other nutrients for our metabolic processes has been obscured in the minds of some physicians by their value as therapeutic agents, and for this reason they have not been as fully accepted and appreciated as they should have been by the medical profession.

Much of the field of nutrition relating to health has been allowed, by default, to fall

Read before the Association in annual session, Birmingham, April 20, 1956.

The author is Director of the Nutrition Clinic, Hillman Hospital, Birmingham.



Fig. 1. Bilaterally symmetrical pellagrous dermatitis (a chronic case). So effective has been therapy in prevention that this disease is virtually non-existent in the southern part of the United States.

into the hands of the faddist and the radio broadcaster. It must be frankly admitted that the lines of demarcation between the normal and the subnormal, and the subnormal and abnormal are not well defined. Every patient with a deficiency disease is different, but often there is some predisposing deficiency that determines the first outward manifestation. Prolonged undernutrition or malnutrition we term nutritive failure, and in effect it is a mixture of diseases operating simultaneously—hence, the need for a well balanced diet rich in proteins, vitamins, and minerals. Prolonged undernutrition leads to a loss of body weight, strength, vigor, and sense of well-being. If severe enough and if allowed to go long enough, death intervenes. Such a state is arbitrarily considered as chronic starvation and, as such, differs from a deficiency disease in that the latter is manifested by the response of the body to an inadequacy of some of the constituents of the diet but not all. For example, many obese persons have a surplus of calories but a deficiency of vitamins and other essential nutrients in their diet.

My associates and I have drawn upon the information available and have tried to combat nutritional deficiency diseases wherever they existed and in whatever form they appeared. We have endeavored to aid the practicing physician directly in that we have worked on problems as they

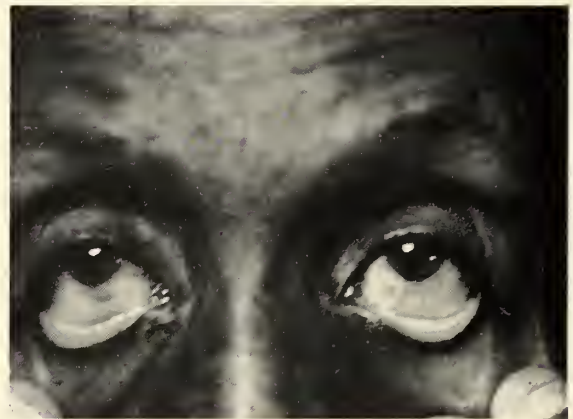
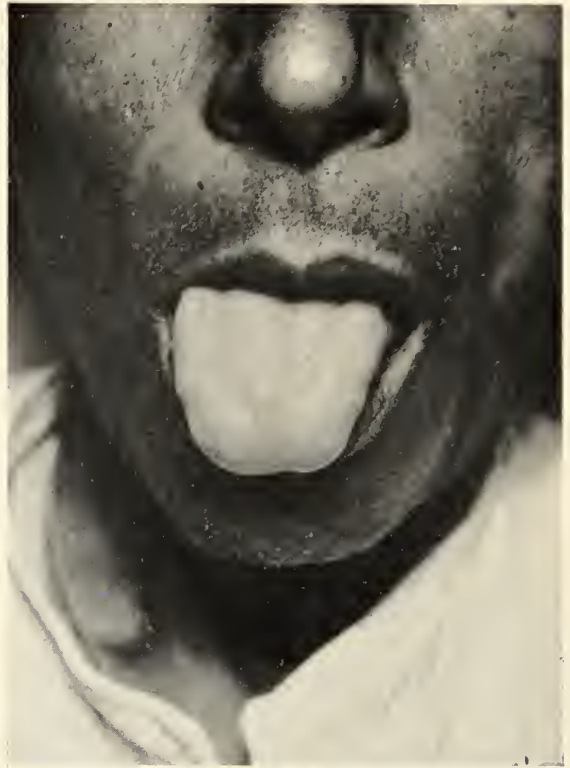


Fig. 2. The marked pallor of the tongue and conjunctivae of a patient with tropical sprue and macrocytic anemia is shown here.

This patient responded to folic acid therapy. The disease has almost been eradicated from Cuba and Puerto Rico in the past few years.

have presented themselves to us or to him. Accordingly, our scientific problems arise from experiences within the clinic and we have tried to devise methods for aiding, without exception, every sick person who comes to us and for whom there is no specific therapeutic remedy known. For any physician this is a long step forward into a world of exciting adventure. Our vast store of data always stands ready to help any and all. After we have made many ob-

servations, we try to become true interpreters. We try to use accurate scholarship and thoughtful judgment. Our interpretations for the physician to apply to the sick are not a hit-or-miss process.

Frequently my friends inquire: Why do you study so many diverse medical problems from a nutritional point of view? My reply is: Our bodies are composed of the air we breathe, the water we drink, and the food we eat. Day after day, year after year, the tissue substances of our bodies are replaced in some intricate combination from the air, the water, and the food. By far the most important of the three is food. A man may go blind, another may become paralyzed, another may become insane, an-



Fig 3. Bilateral cheilosis which disappeared following riboflavin therapy.

other may develop pain, another may be merely tired, another may have a sore mouth, another may have intractable diarrhea, and another may have fatal hemorrhages. In many instances such afflictions can be traced to a nutritional disorder (see Figure 3).

The science of nutrition has pointed the way to the development of a healthier and more vigorous race. Certainly the vitamins, the electrolytes, and the substances with which we work regulate in a most fundamental way life's processes. They control cell respiration; they control oxidation-reduction. Our observations have come, not through a single discovery, but through a series of related studies.

More knowledge in nutrition is badly needed. Too wide and too sweeping generalizations have been made on the basis of too little information. An example familiar to all of you is that the body is a simple machine and food a simple fuel. Obviously the body is much more complicated than a simple machine and food is more than a fuel. With food we have to build, repair and maintain our bodies, as well as supply energy. The body, unlike a machine, has to process food by means of digestion, absorption, assimilation and utilization. Before we can have biochemical independence, we must understand the chemistry of the food in relation to the body as a biologic entity.

Dr. Robert E. Stone, Dr. Guillermo Garcia Lopez, Dr. Ramon Suarez and Dr. Samuel Dreizen and their associates are currently investigating, from a nutritional point of view, the bone marrow, the alimentary tract, the skin, the collagen tissues, the central and peripheral nervous systems, growth and development of infants and children, influence of pregnancy, lactation, growth and aging on nutritional processes, old age itself, susceptibility tests, nutrients in relation to growth, health and disease, periodontal disease and dental caries activity.

Perhaps our greatest interest at the present time is concerned with devising better methods to aid in the management of the so-called degenerative diseases. As you will see in Figure 4, the killers of today did not rank very high 50 years ago.

May I read a few sentences from a recent speech I gave at a meeting of the Southern Medical Association:

"Fifteen million people with disabilities are seeking us physicians for relief. The patients do not like you to tell them to act their age or to live with their infirmities, and they don't like for you to tell them to take it easy and like it. The patients don't like any of this. Our concept of what must be done has come from a large amount of work, and simply stated it is that old age is due to tissue damage and that our cells do not adapt, repair, or replace themselves properly, with the result that they do not maintain for themselves the vital period of their lives. We must devise methods for the physician; otherwise, his office and our hospitals are becoming storage houses for

THE MAJOR CAUSES OF DEATH IN THE UNITED STATES

IN 1900

IN 1950

1. Tuberculosis	}	INFECTIOUS DISEASES	1. Heart disease	}	NON- INFECTIOUS DISEASES
2. Pneumonia			2. Malignancy		
3. Gastro-intestinal infections			3. Vascular lesions of the nervous and renal tissue		

Fig. 4

the ill who should be working and helping us all. We are concerned with the physical and the mental. We have evidence that just as a heart may fail so may the brain or other organs."

As you know, many attempts have been made to develop effective oral substitutes for insulin. For the most part these attempts have been abandoned, and we have

had no fully acceptable antidiabetic agents for oral administration.

Several physicians have inquired concerning our recent studies on the activity and safety of two newer compounds (see Figure 5) in the clinical management of diabetes. May I answer by saying that it is too early to discuss their practical therapeutic usefulness. As yet, they have not

TWO SULFA DERIVATIVES THAT LOWER
HYPERGLYCEMIA OF DIABETES

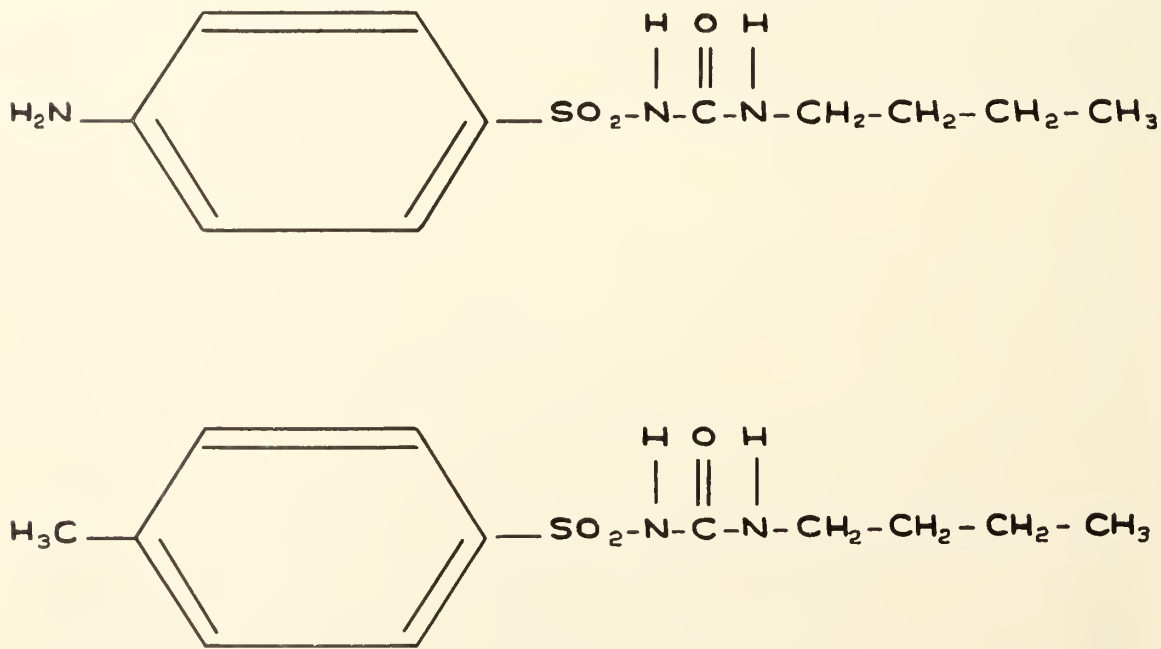


Fig. 5

been studied long enough. There is no doubt, however, that they are active and will reduce the blood sugar in many older persons with diabetes mellitus. Associated with this blood sugar reduction, the glycosuria tends to disappear, and the patient feels better. To date we have no evidence of hepatic or renal toxicity.

Those of you who have worked with the sulfa drugs know their contraindications in general. It will be some time before we know whether or not either of these materials we are now using will have a real place in the treatment of human diabetes. Already it seems evident that these compounds will be of no use in the treatment of young diabetics.

In Figure 5 are shown the formulae of two compounds supplied to Dr. Robert E. Stone and myself. One, "BZ-55," was furnished by the Lilly Laboratories; the other, "Orinase," by the Upjohn Company. Both are effective (see Figure 6). For example,

it is of interest that a 55-year old male patient with severe arthritis of many years' duration developed an elevated blood sugar and glycosuria after a long period of treatment with cortisone, hydrocortisone, prednisone, and prednisolone. A study was done on this patient while he was on treatment on prednisone, and when the dosage was kept constant, "Orinase" was started in amounts of 1½ grams a day and later changed to 1 gram a day. His blood sugar gradually fell, and he stopped spilling sugar into his urine.

The way in which these compounds work arouses great interest, but so far the evidence is insufficient for any definite conclusion. These compounds open a new approach to carbohydrate metabolism in general and to diabetes mellitus in older persons in particular.

In summary, may I say that disease is as old as living matter? From time immemorial man has sought means of easing his

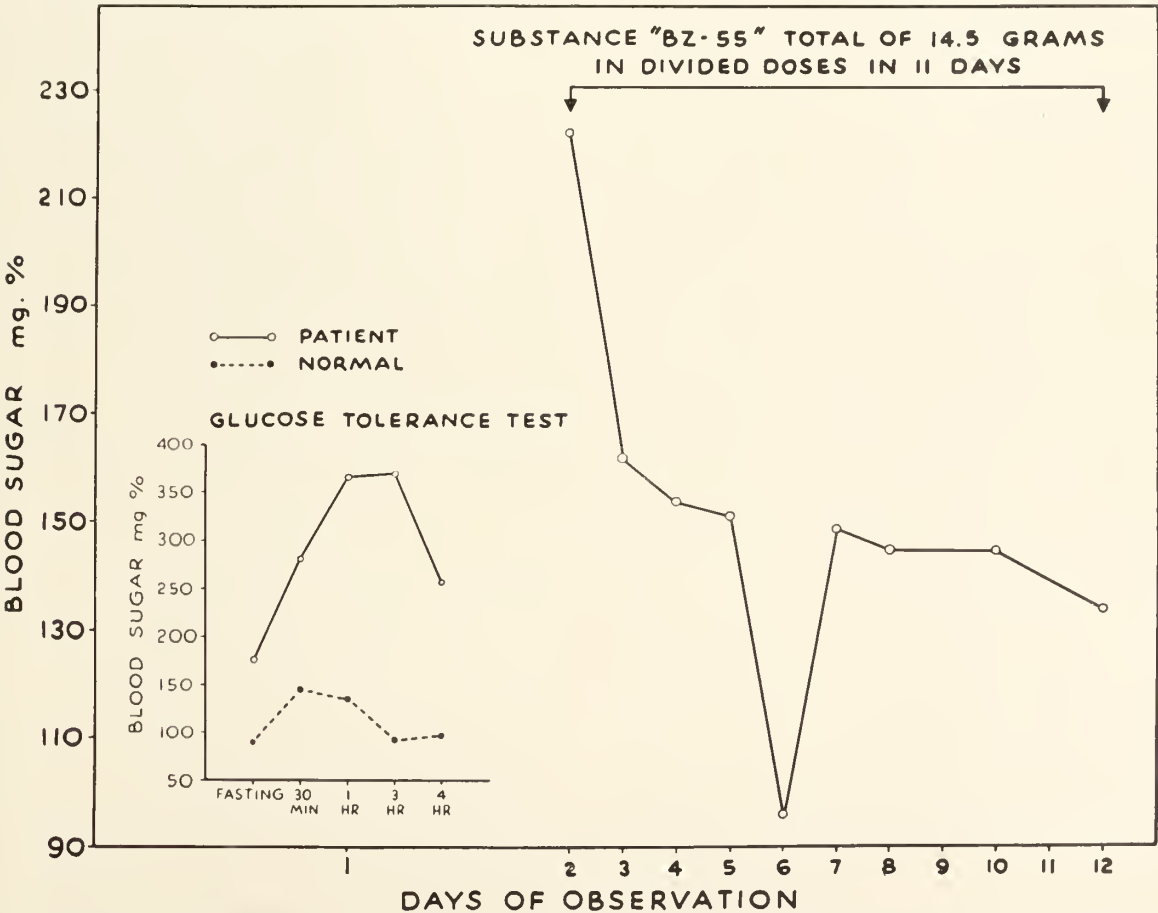


Fig. 6. Note the drop in blood sugar, the first part due to the natural decrease following the glucose tolerance test, the second part due to the effect of the sulfonamide compound. It is noteworthy that the patient had 4 plus sugar in every hourly specimen during the glucose tolerance test.

pain and relieving his disabilities. Great stress is thrown on the nutritional processes by any type of serious disease. There also are many physiologic conditions, such as pregnancy, lactation, growth and aging, which increase the stresses on our nutritional processes. The detection of nutritive failure should be vigorously sought for in the pregnant woman, the mother, the growing infant and child, the aging and those with any type of underlying chemical imbalance predisposing to or precipitating a disease. With these thoughts in mind, it is clear that many persons have placed too narrow a significance on the importance of nutrition and metabolism in general physiologic processes. In nutritive failure of infants, children, and adults the objective always is to restore promptly all needed nutrients to the tissues. When the person with nutritive failure has clinical evidence of beriberi, pellagra, scurvy, sprue, riboflavin deficiency, and certain macrocytic anemias, he should have mixed vitamin therapy. There are many satisfactory formulas with which we have worked. One of the most recent ones follows and the daily dosages for adults are:

Folic acid.....	5 to 10 mg.
Thiamine.....	10 mg.
Niacin amide.....	150 to 500 mg.
Riboflavin.....	10 mg.
Ascorbic acid.....	150 to 500 mg.
Vitamin B ₁₂ (and a potent intrinsic factor).....	5, 10 or 15 ug.
Pyridoxine.....	10 mg.
Calcium pantothenate or panthenol.....	10 mg.
(Pantothenic acid, calcium pantothenate and panthenol have essentially the same effectiveness, molecule for molecule.)	

The treatment of nutritive failure is gratifying when it is diagnosed early and when proper treatment is vigorously and persistently applied.

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True progress in law, in medicine—in almost any area of vital human concern—will come from the discovery and cultivation of common interests by people who share a common purpose, unadulterated by special political objectives or ideological differences.—*Editorial, World Med. J., May 1956.*

New Vaccine for Respiratory Diseases Tested—

An editorial in the January 5 Journal of the American Medical Association said progress already made in the study of virus-caused respiratory diseases indicates that many more problems will be solved "in the foreseeable future."

Two articles in the same Journal reported success in developing a new vaccine to combat non-feverish, grippe-like illnesses especially prevalent among military personnel.

The editorial explained that viruses causing these illnesses, which do not include the common cold, have been variously named AD for "adenoid degeneration" or APC for "adenoidal-pharyngeal-conjunctival" in the past, but are now generally labeled adenoviruses.

At least 14 types of adenoviruses have been identified so far. Types 1, 2 and 5 are frequently associated with feverish respiratory infections in young children. Type 3 causes a new disease called pharyngoconjunctival fever, which is seen most frequently in children. Types 4 and 7 cause much of the acute respiratory disease and primary atypical pneumonia seen among adults, and types 6 and 10 cause conjunctivitis.

The editorial pointed out that the development of simpler laboratory methods has made it easier to identify previously unrecognized viruses, but early hopes that all respiratory diseases of unknown origin could be attributed to the newly recognized viruses have not materialized.

The vaccine described in the two articles was made to combat infections caused by types 4 and 7 adenoviruses. Viruses obtained from patients' throat washings were grown in monkey kidney tissue and then killed by incubating them in the chemical formalin.

The process was described by Maurice R. Hilleman, Ph. D., Mildred S. Warfield, B. S., Salley Anderson, B. S., and Jacqueline H. Werner, M. S., from the department of respiratory diseases, Walter Reed Army Institute of Research, Washington, D. C.

The testing of the vaccine among 600 recruits at Ft. Dix, N. J., was outlined by Drs. Reuel A. Stallones and Ross L. Gauld, both from the Walter Reed Institute and Mr. Hilleman, Miss Warfield and Miss Anderson.

The vaccine, which caused no side effects among the persons receiving it, was found to be effective beginning one week after the initial injection, they said. It caused a marked reduction in the number of illnesses requiring hospitalization during the second through the fifth weeks after vaccination. And no disease was found among the vaccinated men after the fifth week. It also appeared to reduce the number of persons with mild attacks of illness which would normally not have required hospitalization.

The researchers concluded that the vaccine is safe and effective, that only one shot is necessary, and that the vaccine has great potential in military populations with their high rate of respiratory diseases. Evidence regarding the duration of protection was not obtained, and its value among civilian populations remains to be determined, they said.

DIVERTICULITIS OF THE COLON

DON C. ROBERTSON

Orlando, Florida

The modern management of diverticulitis of the colon has undergone a significant change since the advent of antibiotics, and particularly during the past five years. This change, from the former conservative to the now more radical approach, has come about as a result of a number of factors. One important feature in the increasing frequency of this disease is the rising average age of our population. In 1953 Welch, Allen and Donaldson showed that, while diverticulosis or diverticulitis was rarely observed below the age of 35 years, there was from this point onward a steady increase in the frequency of the disease as age progressed. At age 85, diverticula were demonstrated in approximately two-thirds of the patients. There was also a steady rise in the incidence of diverticulitis with age. Thus, in the sixth decade nearly one-fifth of the patients with diverticulosis showed radiologic evidence of diverticulitis while in the ninth decade this fraction had increased to thirty-three and one-third per cent. At the time of their report the incidence of this lesion was considerably higher than that recorded by other authors. Nevertheless, these important figures not only reflect the authors' interest in the subject but also serve to explain the increasing importance of diverticulosis and diverticulitis with their attendant complications.

Other factors in our changed view of management have resulted from our earlier recognition of the complications, combined with a falling morbidity and mortality rate from resection of the colon.

INDICATIONS FOR SURGERY

It is generally accepted that surgery is not indicated for diverticulosis of the colon since the vast majority of these patients do not present sufficient symptoms. A smooth diet, avoidance of condiments and strong laxatives, the prevention of constipation with small doses of mineral oil thrice daily, and occasional courses of Sulfasuxidine or Achromycin will keep many of them symptom-free for a long time. However, one

will see an occasional case of massive hemorrhage in which there are no clinical signs or symptoms or radiologic evidence of diverticulitis. Should bleeding continue, the involved segment of bowel should be resected after adequate preparation, provided there are no contraindications and provided that careful, thorough studies of the entire gastro-intestinal tract reveal the absence of other intrinsic lesions that may be the cause for the bleeding.

The chief indications for the surgical management of diverticulitis are those of its complications, namely, repeated attacks of diverticulitis in spite of a good medical regimen, persistent and increasing deformity, usually of the sigmoid colon, urinary bladder symptoms associated with these episodes and unexplainable on any other basis, recurrent hemorrhage, perforation, fistula formation and, finally, that group of individuals in whom one cannot rule out the possibility of carcinoma.

OPERATIVE PROCEDURES FOR DIVERTICULITIS

The various surgical procedures employed for the treatment of diverticulitis are either palliative or curative. The latter method involves resection of the diseased colon in either a single or staged procedure and should be our ultimate goal. The former outmoded method treats only the complications without removal of the diseased segment and is now rarely employed unless other debilitating circumstances preclude definite treatment.

Many times our first suspicion of diverticulosis is ushered in with an episode of acute diverticulitis usually characterized by left lower quadrant pain, tenderness, fever, leucocytosis, and often a tender palpable mass in the sigmoid colon. Occasionally the mass can only be felt on bimanual pelvic examination. If these patients are seen early in the attack and the true nature of the disease process immediately recognized, they will usually respond to conservative measures such as bed rest, non-residue diet, small amounts of mineral oil thrice daily, Neomycin and Sulfasuxidine. In my experience, emergency surgery is not justified in this type of case. However, if such an episode recurs, or bleeding develops, or

Read before the Ninth Annual Assembly, Alabama Surgical Division, United States Section of the International College of Surgeons, in conjunction with the Tuscaloosa County Medical Society, Tuscaloosa, Oct. 31, 1956.

a persistent and increased narrowing of the colon occurs, as demonstrated by progressive barium enemas, then these individuals, provided there are no contraindications, should be adequately prepared and the involved colon resected. Usually this can safely be done in one stage, and an open end-to-end anastomosis is preferred.

In other instances, the initial or recurrent episode of diverticulitis may not be seen early and the enlarged tender friable mass may be adherent to the urinary bladder and other adjacent structures. In such cases it is wiser to perform a right transverse colostomy and resect the involved colon 3 months later. Likewise, the later complications, such as colovesical, colovaginal and colointestinal fistula, are best handled by the staged procedure. I prefer to close the transverse colostomy in two to three weeks

following the second stage.

Acute perforation of a diverticulum is not uncommon and may or may not be associated with an acute episode of diverticulitis. The diagnosis is usually not made until the time of exploration. The site of the perforation must be found and repaired if the bowel wall is not too friable; otherwise exteriorization, if possible, is the procedure of choice. Moreover, if the bowel wall is too friable to suture, and too inflamed and thickened to mobilize, it is safer to drain and perform a right transverse colostomy. Two to three months later, the diseased colon should be resected and the colostomy subsequently closed.

Finally, in from 18 to 25 per cent of the cases of diverticulitis, one cannot rule out the presence of carcinoma with certainty. This group likewise warrants resection.

ULTRASONICS IN MEDICINE

FERDINAND F. SCHWARTZ, A. B., B. S., M. D.

Birmingham, Alabama

"No man was ever endowed with a judgment so correct and judicious but that circumstances, time and experience would teach him something new, and apprise him that of those things with which he thought himself the best acquainted, he knew nothing; and that those ideas which in theory appeared the most advantageous were found, when brought into practice, to be altogether impracticable."—Terence.

The first half of the twentieth century has laid the foundation for many advances in the field of medicine; and with the advent of the second half the armamentarium of physical medicine has been greatly enriched with new discoveries and modalities, such as ultrasonics.

Even though physical medicine is one of the oldest branches of medicine and was sanctioned as a specialty by the American Medical Association in 1947, yet its scientific instruments and therapeutic employment have been woefully misused by cults and irregular practitioners. Medical men, trained in their respective specialties, keep them sacred and hold on tenaciously to the skill and knowledge which they have acquired for the benefit of mankind.

Read before the Association in annual session, Birmingham, April 19, 1956.

The author is Associate Professor of Clinical Medicine, Medical College of Alabama.

Is ultrasonics new? No! As far back as 1927 Wood and Loomis¹ published their early work on the "Physical and Biological Effects of High Frequency Sound Waves of Great Intensity." In 1932, E. Schlipphake of Germany made an intensive investigation of the effects of ultrasonic waves. Since then over two thousand papers have been published, both in the United States and in Europe, on the effect of ultrasonics. The American Institute of Ultrasonics in Medicine, established in 1952, meets yearly for the exchange of ideas among various scientific workers both here and abroad.

In 1952 Krusen and coworkers² of the Mayo Clinic showed by detailed experiments that small doses of ultrasonics may be beneficial in certain cases but large doses will destroy tissue and may cause irreversible reactions in the body.

During the second annual conference of the American Institute of Ultrasonics in Medicine held in Chicago, August 1953,

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Schwartz³ reported 2911 ultrasonic treatments in osteoarthritis, intercostal neuralgia, ankle sprains and bursitis. Low dosage was stressed on account of possible damage with high voltage as reported in some scientific journals. Again, in January 1953, Schwartz⁴ reported in detail the treatment of osteoarthritis with ultrasonic energy, outlining both the local and neural treatments.

Edmundson⁵ found that rheumatoid arthritis and ankylosing spondylitis in their early stages were relieved with ultrasonics. In his experience, acute gout responded dramatically, especially in the early stages.

At the third annual conference of the American Institute of Ultrasonics in Medicine, held in Washington, D. C. on September 4th, 1954, Reese⁶ reported that muscle spasm and pain in rheumatoid arthritis were relieved with ultrasonics so that therapeutic exercises could be carried out, thus lessening or preventing deformities. Bearzy⁷ gave account of twenty cases of torticollis in which six cases received great benefit after the first treatment, eight after the second treatment, and six after the third treatment. Woeber of Bonn, Germany⁸ used x-ray and ultrasonics as a combined therapy on skin tumors in animal experimentation. According to his statements: "All animals exposed to 350 r and 1.0 watts/sq. cm. of ultrasonics for five minutes

showed a regression and complete resorption of the tumor within eleven days after the simultaneous treatment. The animals remained healthy for a period of observation of 90 days following the combined treatment."

In 1954 Schwartz⁹ reported his experience with bursitis in which there were calcareous deposits. Ninety-three per cent of the cases made good recovery. Edmundson,¹⁰ in 1955, reported encouraging results in paranasal sinusitis in the non-allergic type, with low doses of ultrasonics. Aldes¹¹ treated several cases of herpes zoster and found that ultrasonic therapy shortened the period of vesiculation and crust formation. In fact, early treatment will prevent or modify post-herpetic neuralgia.

Paul and Imig,¹² studying temperature and blood flow after ultrasonic therapy, found that 2.0 watts/sq. cm. intensity showed little change in the blood flow in the forearm but when they used 3.0-3.5 watts/sq. cm., vasodilatation was noticed in most instances and the muscle temperature at a depth of 1.5 cm. was increased. However, these higher energies caused unpleasant sensation, particularly burning.

Friedland,¹³ as a result of controlled investigation, found that ultrasonics is a useful adjunct in the total management of rheumatoid arthritis. Bierman¹⁴ obtained beneficial results in the treatment of four cases of scar contractures. In all instances, functional impairment was diminished and stretching or softening occurred. Lehman

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13. Friedland, F.: Ultrasonic Therapy in Rheumatic Diseases, Am. J. Phys. Med. 34: 379 (April) 1955.

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and coworkers¹⁵ studied the effect of ultrasonics as compared with microwaves in shoulder cases. Shoulders treated with ultrasonics gained more range of motion than those treated with microwaves.

	Ultrasonics	Microwaves
Gain in Forward flexion	27.4°	16.1°
Abduction	22.6°	21.2°
Rotation	45.4°	17.3°

They further stated that "ultrasound can be used by a physician skilled in its application when a suitable unit is available. Because of the selective heating effect of ultrasonic energy, the rise of temperature at the interfaces is marked and occurs rather quickly. As a result, the margin of safety is not as great as in microwave and it is required that a skilled person apply the ultrasonic treatment. Malignant metastatic growths in the axilla should be considered as a contraindication."

Kuitert and Harr,¹⁶ writing in *Physiotherapy Review*, state: "Ultrasonic energy is a definite adjunct in the management of selected musculoskeletal and allied conditions; there is no established dose. This form of treatment is of sufficient potential effect and force to warrant special orientation, medical supervision and special training in technic."

Gersten and Stillwell,¹⁷ experimenting with ultrasonics on spasticity, made sixty-three observations on two hemiplegics and one postoperative cervical cord tumor and found that at lower dose (0.76 watts/sq. cm.) a significant increase in spasticity occurred while at higher doses (1.90 watts/sq. cm.) a significant decrease in spasticity occurred. The duration of this decrease in spasticity was about 10 to 15 minutes.

In Birmingham, we first administered ultrasonic therapy in November 1951 and since that date 611 private patients have been treated receiving a total of 6675 ultrasonic treatments.

15. Lehman, J. F., et al.: *Ultrasonic and Microwave Diathermy in Periarthritis of the Shoulder*, Rochester, Minn.

16. Kuitert, J. H., and Harr, E. T.: *Application of Ultrasound*, *Physiotherapy Rev.* 35: 19-25 (Jan.) 1955.

17. Gersten, J. W., and Stillwell, D. M.: *The Effect of Ultrasound on Spasticity*, *Scientific Proceedings of the Fourth Annual Conference on Ultrasonic Therapy*, Detroit, Mich., Aug. 27, '55, pp. 124-131.

Table 1 shows the types of cases with their clinical results. Great improvement signifies total relief of pain and spasm or complete recovery in such cases as torticollis, bursitis, sprains, sinusitis, and phantom pain. Improvement is the lessening of

TABLE 1

No. of Cases	Region	Greatly Improved	Improved	Not Improved
52	Cervical	38	8	6
59	Dorsal	45	10	4
116	Lumbar	78	11	27
47	Hands	29	3	15
34	Hips	27	—	7
23	Sacro-iliac	19	—	4
72	Knees	55	7	10
11	Feet	8	1	2
4	Large toes	4	—	—
14	Elbows	11	—	3
39	Shoulders with calcium	34	—	5
61	Shoulders without calcium	45	—	16
22	Biceps tendonitis	19	—	3
3	Phantom pain	3	—	—
3	Sinusitis	3	—	—
4	Postoperative discs	3	—	1
5	Temporomandibular arthritis	4	—	1
8	Torticollis	6	—	2
1	Morton's metatarsalgia	—	—	1
3	Dupuytren's contractures	—	3	—
4	Varicose ulcers	3	1	—
1	Buerger's disease	1	—	—
25	Rheumatoid arthritis	16	3	6
611		451	47	113

pain and spasm and in some instances temporary improvement. Improvement in arthritis denotes complete relief of pain and spasm, and the patients were ready for therapeutic exercises and occupational therapy.

Table 2 summarizes the total number of improvements and non-improvements. It is noted that 81.5 per cent obtained relief, and

TABLE 2

Total Cases Treated	Improved	Not Improved	Per Cent of Improvement
611	498	113	81.5

most of the failures in the remainder of the cases were due to long standing chronicity and the lack of co-operation of the patients.

Table 3 presents the total number of cases and the total number of treatments. Some patients received one treatment and discontinued therapy. Other patients received as high as thirty-three treatments. It seems that if a patient does not show any sign of improvement after the fifteenth treatment then treatments should be discontinued. The treatment schedule was continuous without rest period. Dosage never exceeded 1.5 watts/sq. cm. and the time was from five to ten minutes. The appropriate dose was selected on the basis of tissue involvement and experience.

TABLE 3

Number of Cases Treated	Number of Treatments Given
611	6,675

Table 4 reveals that among 6,675 ultrasonic treatments there were only three complications, which consisted of dizzy spell, fainting spell and weakness. These were probably due to the irradiation of areas T-1 and T-2.

TABLE 4

Number of Treatments Given	Number of Complications
6,675	3

In rheumatoid arthritis, as shown in table 5, the result was 76 per cent improvement. However, with ultrasonic therapy the patients were given medications such as cortisone and ACTH but the course of the disease was greatly shortened in obtaining relief from muscle spasm, pain and stiffness. The best results were obtained in knee and hand cases.

TABLE 5

Rheumatoid Arthritis from Table 1

Number Treated	Improved	Not Improved	Per Cent of Improved
25	19	6	76

The most dramatic results were obtained in subdeltoid bursitis cases where x-ray revealed calcareous deposits. In some instances, after the first sounding, the patient obtained immediate relief from pain. The earlier the patients were treated the better the results. When the calcium deposit had undergone definite bone-like changes, then

the deposit was not destroyed with ultrasonic therapy. In cases where a hand-shoulder syndrome accompanied the bursitis, no clinical results were obtained.

TABLE 6

Subdeltoid Bursitis with Calcareous Deposit from Table 1

Number Treated	Improved	Not Improved	Per Cent Improved
39	34	5	87.23

TABLE 7

Summary of Per Cent of Improvements

Types of Cases	Per Cent of Improvement
Subdeltoid bursitis with calcareous deposit	87.17
Biceps tendonitis	86.18
Osteoarthritis of the knees	86.11
Osteoarthritis of the cervical, dorsal and lumbar spine	83.70
Osteoarthritis and sprains of the feet	81.81
Osteoarthritis of the hip and referred pain	79.41
Shoulder pain with no calcareous deposits	79.40
Elbows	78.13
Hands	70.20
Phantom pain	100.00
Sinusitis, non-allergic, with drainage	100.00
Rheumatoid arthritis	76.00

DISCUSSION

The earlier patients are treated with ultrasonic therapy the better clinical results. The mode of action of ultrasonics is not yet known even though there are several theories that seek to explain its action as mechanical, biochemical, neural or thermal. In my opinion the thermal effect is negligible since clinical results could not be obtained previously with deep heat-producing modalities.

I grant that every energy will create heat, but in the case of ultrasonics the thermal factor is not important enough to account for the dissolution or resorption of the calcium deposit. The mechanical effect due to the high frequency of the sound waves, together with biochemical changes in the cells and their effect on nerve impulses, would more clearly account for its action. Ultrasonic therapy, as has been stressed by various authors, must be administered with skill, care, knowledge and training. It is not a "push-button" machine to perform miracles in untrained hands.

SUMMARY

1. Six hundred and eleven cases are presented which received a total of 6675 ultrasonic treatments from November 1951 to January 1956.

2. Ultrasonic therapy is a helpful adjunct in the treatment of certain neuromuscular and skeletal muscular diseases.

3. Low dosage is advised and it should be administered with medical supervision.

4. Dosage and time element are not established yet.

5. Good diagnosis, knowledge of anatomy, pathology, neurology and physiology are important in carrying out the treatments.

916 S. 20th Street.

Doctor-Lawyer Meeting Scheduled for Atlanta

—The American Medical Association has invited doctors and lawyers in the South and Southeast to a medicolegal symposium in Atlanta, Ga., March 15 and 16.

"Medicine and the law must work together so frequently that we feel open discussions of mutual problems would be of great assistance to the two professions," said C. Joseph Stetler, Director of the American Medical Association's Law Department, in announcing the meeting.

One of a series of three such symposiums to be held during March in various sections of the United States, the Atlanta symposium will feature such subjects as trauma and disease, medical expert testimony and the medical witness. In addition, a mock trial demonstration will take up the introduction in court of chemical tests for intoxication.

Registration fee for the meeting—to be held at the Atlanta-Biltmore Hotel—is \$5.00. This will cover the cost of a luncheon session and a copy of any proceedings that are published. Plans are being made to accommodate 350 attorneys and physicians. However, Mr. Stetler pointed out that advance interest in the symposium is so great that early registrations are advisable.

Applications for attendance, together with the registration fee, should be sent to the Law Department, American Medical Association, 535 North Dearborn, Chicago 10, Illinois.

Other meetings in the current medicolegal series will be held in Denver, March 22-23 and in Philadelphia, March 29-30. Last year similar symposiums were held in New York, Chicago and Omaha.

Begin New Campaign Against Accidental Poisoning—Medical and nonmedical people have banded together in a new all-out war against accidental poisoning, which has killed some 15,000 Americans, including 5,000 children in the past decade.

The latest developments in the intensive campaign were outlined in a special article in the January 12 Journal of the American Medical Association.

Much progress has already been made in the fight to reduce accidental poisoning. Ten years ago it was estimated that every day over 850 persons became ill and six persons died from eating or drinking some poisonous agent. Today the rate is 425 nonfatal and three fatal cases of poisoning every day. This reduction has occurred in spite of a growing population and a growing number of new potentially harmful household items and drugs, mainly because of the intensive efforts of many medical and nonmedical groups.

Examples of the efforts of various groups listed in the article include the Boy Scouts of Troop 99 in Montclair, N. J., making door-to-door calls on 1,000 families to warn of the dangers in home medicine chests, and the Milwaukee Junior Chamber of Commerce sponsoring a "Poison Day" when they handed out warning leaflets in shops and on street corners.

Medicine's contribution has been the formation of poison control centers, which are set up in medical schools and hospitals as a source for emergency information. A doctor receiving a call about an accidental poisoning can contact the center, give the name of the poisoning agent and find out if it is harmful and what treatment is necessary. Since November 1953, when the first center was set up in Chicago, centers have been set up in 35 other U. S. cities. New ones are being formed at the rate of nearly two a month and Canada's first two poison centers were scheduled to go into operation this month.

New efforts to reduce further the number of poisonings include:

—A nationwide newspaper advertising campaign emphasizing poison hazards at home which was launched in January by the National Safety Council, the National Advertising Council and the Proprietary Association (of over-the-counter drug wholesalers).

—A meeting soon in Washington, D. C., of the nation's top medical experts on poisoning, public health officials and interested lay authorities to establish a clearinghouse for exchange of vital information from the various poison control centers.

—The A. M. A.'s Committee on Toxicology's current work on a model law to require labeling of the many household chemicals that do not list potentially harmful ingredients.

—A study of treatment for poisoning by kerosene, one of the "toughest poisons to counteract." The American Academy of Pediatrics, A. M. A., the American Public Health Association, major medical centers and schools, and medical advisors for the petroleum industry are cooperating.

Hearing Aid Modified for Use in Surgery—The transistor hearing aid has assumed a new, and sometimes lifesaving, task: monitoring the breathing of an unconscious surgical patient.

A Baltimore dentist and a physician described in the January 26 Journal of the American Medical Association how they adapted the hearing aid to its new use. They call their apparatus the Breathophone.

It consists of a hearing-aid transistor amplifier, a hearing-aid earphone that does not have to be worn in the ear, and a microphone that is removed from the hearing aid and placed within the anesthesia breathing apparatus.

Sylvan M. Shane, D. D. S., and Dr. Harry Ashman of the department of anesthesiology, Lutheran Hospital of Maryland, said that amplifying the breathing sounds is the most accurate way of checking an unconscious patient's respiration. If breath sounds are not audible, the only other way of checking is to watch the slight rise and fall of a rubber breathing bag.

However, this is "fraught with inefficiency and danger," since it is almost impossible to look constantly at a moving breathing bag without eventual self-hypnosis, they said. In addition, a breathing bag gives no indication of a partial respiratory obstruction.

A microphone from a hearing aid is inserted into a cork and reconnected to the hearing aid amplifier by lengthening the original connecting wires. The cork is then put in a small T-tube which can be placed anywhere within the anesthesia breathing circuit.

The slightest breath causes the air within the T-tube to move and strike the microphone. The battery-operated hearing aid amplifier then magnifies the sound heard through the hearing-aid earphone. It isn't necessary to wear the earphone in the ear. It can be placed in a small open-mouthed jar or paper cup which acts as a loudspeaker, and the sounds can be heard by everyone in the operating room.

One advantage of the device is that it requires no contact with the patient. Two years ago the authors reported using a throat microphone that was attached to the patient's neck. But it proved impractical in neck surgery because it could be momentarily moved out of place.

The Breathophone has been of "inestimable value," especially in head, neck and pediatric surgery, providing "an additional and highly important safeguard" in the care of the unconscious patient, they concluded.

Many Students Enter Medical School with "C" Average—You don't have to be a "brain" to get into medical school.

A recent report by the American Medical Association shows that 13.6 per cent of the students who entered the nation's 76 approved four-year medical schools during the 1955-56 academic year had a "C" college grade average.

Over a six-year period, 70.6 per cent of the entering students had a "B" average while, over the same period, only about 15.8 per cent of the entering classes had the enviable "A" average.

"College academic achievement as measured by scholastic records is only one factor among many utilized in the selection of medical students," the report said.

Four Cases of Leukemia in One Family Reported—The chances of leukemia occurring in more than one member of a family are exceedingly small, but when it does occur, it may result from some hereditary factor, two North Dakota physicians said recently.

Drs. Marlin J. E. Johnson and Clifford H. Peters, Bismarck, N. D., observed the development of three cases of acute leukemia and one of lymphosarcoma (a related disease of the lymphatic tissue) among four of 12 children in a North Dakota farm family during 1952-54.

Only two other families in which more than two children had leukemia or lymphomas have been reported. Five of eight children in one family had acute leukemia, while four of seven children in the other family had either leukemia or lymphomas, the doctors said in the January 5 Journal of the American Medical Association. A worldwide survey in 1953 revealed only 12 other families in which two children had acute leukemia.

Three brothers, aged 24, 26 and 29, and one sister, aged 33, were all fatally affected.

The chances of four cases occurring in a family of 12 children are about five in one billion, the authors said. They did not believe that the chance played a part in these cases. Neither did environmental factors. Rather they believed that heredity played a major role in these cases, especially when they learned that the parents of the children were first cousins. Their grandmothers were sisters and their grandfathers were believed to have been fourth cousins.

The doctors noted that one of the other two families with more than three affected children was also the result of a marriage between relatives. And it is "a well-known genetic fact" that the frequency of rare diseases due to inherited characteristics is greater among children resulting from marriages between relatives than among the general population.

The uniform age of onset and the similar, rapidly progressive nature of the disease in the four patients also suggested a hereditary factor, they said. Twenty-nine of the patients' first cousins lived in the same area and none of these cousins suffered any sort of malignancy. However, none of these cousins was the offspring of consanguineous marriage.

The failure to find any environmental agents as the cause of the disease does not mean that they do not exist, the authors said. However, "if they do exist, we are still confronted with the necessity for explaining why some of the children contracted leukemia, while others did not."

Six States Produce Most Medical Students—Forty per cent of all first-year students in the nation's 76 approved four-year medical schools come from six states: New York, Pennsylvania, California, Ohio, Illinois and Texas.

A recent report by the American Medical Association shows that the first-year enrollment of all the approved medical schools in these states during the 1955-56 academic year represented 42 per cent of the total enrollment for the nation. Almost 38 per cent of all U. S. medical schools are located in these same six states.



Editorials

SURGICAL PROCEDURES: CLASSIFICATION AND NOMENCLATURE

Further simplification of health insurance administration has been achieved through the introduction by the Health Insurance Council of a standard nomenclature and classification of surgical procedures. This new manual for insurance companies, entitled "Surgical Procedures: Classification and Nomenclature," is intended to expedite the payment of claims under surgical expense insurance contracts by aiding in the adoption of a uniform terminology for surgical procedures. It does not in any way attempt to establish a schedule of physicians' charges for operations.

The booklet adapts for insurance company use the Standard Nomenclature of Diseases and Operations of the American Medical Association and is now being distributed to companies, according to Council chairman Howard A. Moreen, Vice-President of Aetna Life Insurance Company, Hartford, Conn. Prepared after consultation with a committee of the AMA Council on Medical Services by the Health Insurance Council's Technical Advisory Committee, the nomenclature covers some 1000 procedures into which practically all surgical operations may be classified.

Frequent reference was made to schedules developed by medical prepayment plans in order that a maximum of uniformity of terminology could be achieved. Development of this standard nomenclature is in line with the uniform claim form program that was initiated by the Health Insurance Council to simplify the work of doctors and hospital staffs in furnishing information required for the payment of surgical and hospital benefits.

The 58-page manual is divided into three parts. Part I contains the code of classification of nine generic types of surgery based on authoritative medical classifica-

tion. Part II lists the nomenclature of procedures in medical terminology with a lay language key, while Part III presents an alphabetical index of classifications for cross-reference.

In its introduction to "Surgical Procedures: Classification and Nomenclature," the Health Insurance Council states, "It is also hoped that any new surgical schedules which may be required to keep abreast of expanding medical practice will be developed in terms of this Classification and Nomenclature. In this way, over a period of time, some standardization of the descriptions of this form of insurance may be obtained."

"The work is not directed in any way toward the establishment of either the amounts of the surgical benefits payable or the amounts of the doctors' charges for surgical procedures. Furthermore, it is not intended to suggest that surgical schedules will necessarily cover all procedures listed, particularly in the case of the substitute surgical procedures which are performed in lieu of cutting operations."

Mr. Moreen, in announcing publication of the guide, also advised that doctors and hospitals may obtain copies without charge by writing to the Health Insurance Council, Room 800, 488 Madison Avenue, N. Y. 22, N. Y.

The Health Insurance Council is a federation of eight insurance associations whose members account for 90% of the health insurance business. It serves as a central source of technical and practical information for members of the medical and hospital professions.

FAULTY FAT TRANSPORT

Public Health Service scientists have produced fatty deposits characteristic of early atherosclerosis in the hearts and arteries of rats, a species naturally immune to this disease.

This has been done by injecting them with human lipoproteins, the large fat-protein molecules, in which form the body transports fats through the blood.

This finding, which further implicates faulty fat transport in the causes of atherosclerosis, was recently published by Drs. Joseph Bragdon, Edwin Boyle, and Richard Havel, researchers at the National Heart Institute of the National Institutes of Health in Bethesda, Maryland.

The lipoproteins in human blood vary in density, or weight per unit of volume. Some of the larger and lighter "low-density" molecules tend to rise, like cream, if blood serum is allowed to stand for a few hours. Other heavier and denser molecules will layer at the surface only if subjected to centrifugal forces many times that of gravity.

With the use of an ultracentrifuge, a rotary separator capable of applying forces 259,800 times that of gravity, the researchers separated the lipoproteins of pooled human serum into four classes or "fractions" on the basis of density.

Fraction one, the class of lowest density, concentrated on the surface of the test tube as a solid buttery layer when subjected to 9,500 gravities for ten minutes. After the "butter" was removed, the addition of salt water and the application of 105,000 gravities for twenty-two hours brought fraction two to the surface of the test tube as a fluid "butter-and-cream" layer, which was removed. The addition of further salt to the balance of the serum pool and the application of 105,000 gravities for another twenty-two hours concentrated fraction three, a thin orange-yellow layer, at the top, where it was collected. Fraction four, the class of highest density, required the further addition of salt and forty-eight hours of rotation at 105,000 gravities to appear at the surface as a thin faintly yellow layer.

The researchers injected samples of the newly designated fractions into the tail veins of forty-three male rats. Five hours later they killed the animals and examined their hearts, arteries and blood serum for effects of the injections.

Abnormal deposits of fatty material were found on the valves and inner linings of the hearts and in the coronary arteries of rats receiving fractions one, two and three. Fraction four produced no such abnormalities in any of the animals.

The researchers also found that injection of the low-density molecules caused the appearance in rat serum of those of higher density. This was expected, for the reduction of the larger molecules to the more compact high-density ones is thought to be a normal part of fat metabolism.

More surprising was an elevation of low density lipoproteins following the injection of the higher density ones. The researchers theorize that abnormal quantities of the high density material may have blocked the natural mechanism for removing those of lower density.

The lipoproteins of the low density (classified by the researchers as fractions one, two, and three) are thought by many authorities to be implicated in atherosclerosis, chief cause of death in the United States.

The blood plasma of men generally contains a higher proportion of these suspect fractions than that of women, and nearly twice as many men as women die of atherosclerotic heart disease.

Sufferers from nephrosis, diabetes and other diseases which are conducive to atherosclerosis also have relatively greater proportions of the low density classes than normal persons.

New Multiple Patch Test Technique Described

—Two dermatologists have described a new technique requiring only an elastic bandage, several gauze squares and old x-ray film, for running at least 10 simultaneous patch tests for allergies.

Dr. Raymond A. Osbourn, Washington, D. C., and Dr. Thomas W. Tusing, Vienna, Va., said in the American Medical Association's December Archives of Dermatology that their multiple patch method is rapid, convenient, and uncomplicated.

They use an elastic bandage 18 to 20 inches long, which is cut into strips and to which gauze squares are attached, giving it a gridiron appearance. Test materials—creams, saturated felt pads or pieces of cloth—are applied to the gauze squares. Open spaces between the squares keep the test materials from spreading.

The whole bandage is placed on the upper arm and held in place with adhesive tape or a self-sealing gauze requiring no tape.

The doctors also make a chart with which to read the results of the tests. The chart is something like the cut-out key used to grade intelligence tests. The chart, made from an old x-ray film, has openings cut to fit the outline of the gauze squares of the bandage. After removing the bandage, the plate is placed over the area covered by the bandage and the skin contact areas are easily located.

SPECIAL ARTICLE**FREEDOM IN MEDICAL PRACTICE**

Dwight H. Murray, M. D.
President

American Medical Association
Napa, California

Almost six months have elapsed since we last met to deliberate and act on medical affairs. The time has passed quickly, but not quietly.

The rumble of war and revolution has resounded in our ears. The din from political battles has been deafening.

All of us . . . sooner or later . . . learn that today's events do not just swirl around us but involve each of us. As doctors we cannot get away from them by claiming that our only interest is in the sick, and that we cannot be bothered by political, social and economic problems. These matters demand attention from the doctor as well as the lawyer, the businessman, the newspaper editor, the labor leader and the worker.

If we are concerned about what happens on the international, national and local fronts—and we should be, then certainly we cannot afford to be disinterested in what happens in our own area of health and medical affairs. Yet there is apathy in our ranks.

REPLACE APATHY WITH ACTIVE,
UNITED PROFESSION

Today there is a greater need for a united, forceful and informed profession than ever before. We have been caught in the throes of a social revolution which demanded something for nothing. Changes have been taking place all around us, and medicine has not escaped unscathed.

For example, in a few days Public Law 569, the bill providing medical care for military dependents, becomes effective throughout the land. Contracts already have been signed with the government by the majority of our state societies. No longer can any doctor claim that this law does not affect him. No longer can he say that government laws really are not changing the practice of medicine.

Delivered at the opening session of the House of Delegates at the clinical meeting of the American Medical Association, Seattle, November 27, 1956.

Public law 880, better known to all of us as H. R. 7225, is another case in point. Medicine now is facing the problem of protecting the taxpaying public from abuses and of cooperating with the government to carry out the provisions of the law. The law is now on the books, and we must provide the leadership necessary to make it work as well as possible.

It was encouraging to hear Ezra Taft Benson, Secretary of Agriculture, say recently before the American Association of Land Grant Colleges and Universities:

"Sooner or later, the accumulation of power in a central government leads to a loss of freedom . . . Raids on the federal treasury can be all too readily accomplished by an organized few over the feeble protests of an apathetic majority. With more and more activity centered in the federal government, the relationship between the cost and the benefits of government programs becomes obscure. What follows is the voting of public money without having to accept direct local responsibility for higher taxes . . .

"If the present shift of power from state to federal authority which started 25 years ago is allowed to continue, the states may be left hollow shells."

It was encouraging to hear such comments from a member of the President's Cabinet. I only wish that all members of the official family and, more important, every member of the United States Congress felt the same way.

The expression of this philosophy, with which medicine so heartily agrees, sounds good, but putting it into practice is the thing we are really interested in.

Today the medical profession, along with business and industry, is caught between those who desire to promote sound government and those who desire even more intensely to perpetuate party power. Unfortunately, in recent years a benevolent federal government appears more attractive to the voting public than the preservation of individual freedom. Medicine must do its utmost to reverse this trend.

MEDICAL FREEDOM ESSENTIAL

In my travels around the country as your representative the last 18 months, I have seen little dissension or rancor within our ranks. However, I must report that I have seen too much complacency over govern-

mental encroachment into medical affairs. And I am deadly serious when I say to you that apathy by the few, or by the many, can be detrimental to all.

No nation can merely reap the benefits of freedom; it also must sow seeds of freedom.

In medicine the situation is the same. If an apathetic medical profession takes its freedom for granted, it will be the beginning of the end. A strong, free profession must work for freedom so that it may live in freedom. And history tells us that once medicine loses its freedom, other fields of private endeavor are immediately in danger.

I do not wish to paint a dark or distorted picture of medicine's free status and its stature in America today. But I do believe words of caution and an appeal for vigilance are in order.

The road of apathy and disunity can only lead to disorder and perhaps disintegration, and we must sound a warning to all our colleagues who don't care, or who are pulling in the opposite direction. The road of alertness, action and unity is the proper road for all of us to be traveling together.

If I had just one wish for the coming year, it would be to command the time and talents of the 160,000 physicians in the American Medical Association. I would set us all to the task of emphasizing and re-emphasizing the absolute necessity of patient and professional freedom.

PATIENT'S RIGHT TO CHOOSE HIS DOCTOR

I believe it is one of our prime responsibilities to prove to our patients that their right to choose their doctor is a most important one.

Free choice brings a bond of confidence between doctor and patient which no compulsory medical system can create. It means that the patient knows the physician will be interested in him as a person, not as just a serial number of the 2:45 appendicitis case.

For the doctor free choice means that the patient has selected him for his abilities, training, sincerity and personality. When a patient comes into my office, I know he has made a choice. And from that moment there begins a physician-patient relationship of the highest order. To me the patient is someone special, and I in turn hope I am

someone special to him.

Once the patient has made his choice, the physician automatically assumes an unqualified responsibility to the patient. No system of medical care that uses a third party to bring doctor and patient together can match our kind of cooperative performance for the treatment of illness, the cure of disease, and the betterment of the patient's health.

Freedom to select a doctor is part of everyone's great freedom to choose—to choose what he wears and eats; where he works and worships, and how he votes. Take away any part of this freedom and great damage is done to our democratic system.

FREE CONDUCT IN MEDICAL TREATMENT

Another freedom closely tied to freedom of choice is freedom in the conduct of medical treatment.

At the recent meeting of the World Medical Association in Havana, Cuba, Dr. Rolf Schloegell of Germany made a stirring defense of free conduct of medical treatment. He told us that the medical profession believes the attending physician alone is competent to decide what measures he deems necessary and will apply in order to bring about the desired improvement. He warned too of the danger of excessive restriction on the freedom of the patient and the attending doctor.

Yet the trend toward extending social security in the medical care field has been steady and has accelerated since the end of World War II.

The dangers of shifting responsibilities for medical care from the patient and doctor to the government are obvious. The caliber of medical care cannot be as high when both patient and doctor are dependent upon government. Initiative succumbs to dictation, and self-reliance is replaced by the crutch of government.

We do not deny that there is an area of legitimate concern by the government for the health and welfare of the people. But each year government seems to extend that area. We get some idea of this expansion from the new federal medical budget.

This year, according to our Washington Office, the average family will be paying \$54.61 for the U. S. Government's health and medical activities. And the total ex-

penditures this year amount to 2½ billion dollars—290 millions more than last year. Even in an over-all federal budget of 61 billion dollars, the total health cost of 2½ billions is not insignificant. It is a billion dollars more than the cost of running the Commerce Department, half a billion more than the Agriculture Department, and six times more than the Interior Department's budget.

Many expenditures obviously are necessary to keep up our unsurpassed public health standards, and research may pay rich dividends in scientific discoveries. But there is no doubt that much money is being spent on medical activities that should not involve government participation.

The trend is to spend more and more government money on health and medical matters because it is good politics. Apparently many Americans still want to see government in the role of a big brother, dishing out so-called gifts and bargains under the guise of benevolent economic planning.

I believe it is our duty, as it is everyone else's, to combat the attitude of "what's in it for me?" and to promote the long-honored creed of "what's best for all Americans and our free society?" I think that a nation can drift into state medicine inch by inch just as surely as if the scheme were foisted upon a people overnight. The "drift" method may take longer but the result will be the same.

So it is time all of us sounded the alarm against soft and superficial security and against the invasion of personal responsibility. It is time we stood up together for militant freedom and for full rights and responsibilities of the individual.

BELGIAN DOCTORS TURN BACK GOVERNMENT

There is no better example of what a unified medical profession can do than in the story of the recent fight of the Belgian doctors against the government's proposals for a state service of medicine.

Without consulting the medical profession the Belgian government proceeded to draft rules and regulations of health to be incorporated in the nation's social security legislation. Under the proposals doctors were to sign an agreement to abide by the present rules and any later regulations. For the patient there would be the usual red tape in getting medical care.

When the Belgian doctors learned of the scheme, they met in conference with the government. They told the government what they wanted and what they would not accept. The government agreed.

For several months everything was quiet. Then the Belgian doctors suddenly read about the new health bill that the government was sending to Parliament. It was quite contrary to the earlier agreement worked out by the profession and the government. But the bill was passed quickly.

The Belgian medical profession protested and said it would not be placed under the Ministry of Labor. Instead the doctors proposed to set up their own plan of medical assistance.

Before long, the government saw that the medical profession meant business and that the doctor's plan was an attractive one. So it declared that its own bill was not in force and could not be in force without the consent of the medical profession.

To me this fight against legislative intervention in medical care is excellent evidence that the profession can defend itself if it unites to defend the basic principles of freedom and if it offers constructive proposals. By using the Belgian national motto, "In union there is strength," the medical profession showed doctors everywhere that dangerous government plans can be turned aside by the strong.

I also read recently in the Journal of the World Medical Association of the fight of the medical profession of Malta against a British government scheme to introduce a full-time salaried medical service, without the right of private practice, on an island dependency of Malta. Here again the doctors reacted with unity and strength, and successfully thwarted the government's plan.

There is a lesson in these stories from Belgium and Malta. They prove that a unified profession has a great political power for good—the good of the patient, the doctors and the nation.

CONFIDENCE AND UNDERSTANDING NEEDED

While we are developing unity within our own ranks, I believe it is equally important to continue to build up the confidence and respect of our patients and to make our legislators aware of the necessity for freedom in medical practice.

Let us never reduce the quality of service we render to our patients, and never lose the personal touch in medicine. Where there is any opportunity to improve upon our medical care, let us seize it and show our abilities to do an outstanding job. Satisfied patient-customers will give us deserving support when we need it.

We also should realize that the destiny of medicine can be determined to a large degree in the halls of Congress. If this be true, then it is even more important that we take an even greater interest in those who elect the Congressmen. Sympathetic understanding of our position by federal legislators through the voting public will be an insurmountable deterrent to the forces supporting state medicine.

The day has come, gentlemen, when we can no longer look upon medical economics and social changes merely as issues to be considered during our limited leisure hours.

Proposed Treatment for "MS" Found Useless—

Previous indications that a vitamin-B-like synthetic drug might help multiple sclerosis patients were unfounded, further research has shown.

Two groups of researchers said recently that isoniazid, used successfully against tuberculosis, has little effect on the course of multiple sclerosis over long periods.

MS, as it is sometimes called, is a disease of unknown cause which attacks the nervous system, resulting in weakness, incoordination, jerking of limbs and other symptoms. No cure is known. Two reports on attempts to treat MS by isoniazid appeared in the January 19 Journal of the American Medical Association.

Two years ago, Drs. John T. Kurtzke and Louis Berlin, White Plains, N. Y., reported striking improvement in hospitalized patients given isoniazid for less than three months. Since then they have conducted tests on more patients for longer periods. They reported that isoniazid resulted in about the same improvement as would be expected without any treatment. Patients still receiving isoniazid after discharge from the hospital had periods of worsening at about the same rate as those not getting it.

Another article in the issue reported a study in 11 Veterans Administration hospitals in which 186 patients with MS were studied for at least nine months. This study, stimulated by the original report of Drs. Kurtzke and Berlin, also showed that the drug had no effect on MS.

The VA researchers were headed by Dr. Benedict Nagler of the VA central office, Washington, D. C.

Our interest in them cannot be superficial or intermittent.

We now must pay daily attention to these matters. Medical socio-economic affairs can no longer be just incidental with us. They must be a vital part of our life and of our profession.

Each of us, I believe, should dedicate himself to the words included in the oath of office taken by Presidents of the A. M. A.

"I shall champion the cause of freedom in medical practice and freedom for all my fellow Americans."

As doctors, representatives to the A. M. A., and as spokesmen for the A. M. A., let's remember these words and live by them. And to alter a phrase of President Lincoln's only slightly: Let's make common cause to keep the good ship of medical freedom on this voyage, or nobody will have a chance to pilot her on another voyage.

Medical Device Now Used to Study Surgeon's

Range—The laryngoscope, an instrument which doctors have used for more than a century to examine the larynx or voice box, has apparently found a useful place in the field of music.

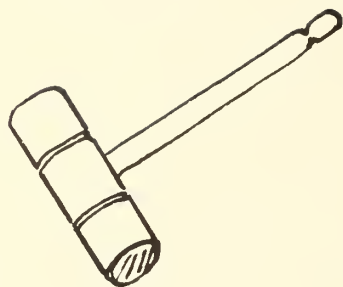
A New York voice and speech teacher reports in one of the current American Medical Association publications that he can use the instrument to great advantage to learn what type of voice a singer has before lessons begin.

William A. C. Zerffi, a member of the faculty of the New School for Social Research, said voice identification is usually left to the teacher's judgment. But because of bad singing habits or because of the human ability to imitate various sounds, a voice is sometimes misidentified. This can lead to improper training, bad singing habits, or even the shortening of a singer's career.

However, these difficulties easily can be avoided by using the laryngoscope. The teacher simply looks at the length of the vocal cords. The shorter the cords, the higher the voice; thus a soprano has shorter cords than a contralto and a tenor has shorter cords than a bass, Zerffi explained.

The laryngoscope also offers the teacher an opportunity to see just how the vocal cords function, which will help him in his teaching. Zerffi said in the January issue of the Archives of Otolaryngology.

It is important that a singer be taught to sing within his natural range since only within that range can he sing easily and without exerting physical force. When he tries to sing in a higher or lower range, he must exert muscular force to the cords, and it's "little short of criminal to apply such force to so delicate a mechanism," he said. Continued forcing eventually injures the cords and shortens the singer's career.



President's Page

YOU AND YOUR GOVERNMENT

Much interesting and useful information comes out of the Washington office of the American Medical Association; and, as I understand it, these letters are not received by very many doctors in the state. Since the Journal of the Medical Association of the State of Alabama is received by every doctor in the state, I asked and received from Dr. Thomas H. Alphin, Director of the Washington office, the privilege of using this information on the President's Page.

For the last twenty-five years the government has progressively gotten bigger and I hope better. At least, it continues to exert an ever increasing influence on the lives of the people of the United States, including the doctors. For some reason it has been the philosophy of many doctors to devote their entire time to the practice of medicine, leaving the running and the operation of the government to others. In many respects this is a commendable attitude and has worked well for the doctors and for the health of the people. I feel certain, along with an ever increasing number of physicians, that this negative attitude concerning government will not continue to be beneficial to the doctors. In my opinion it is going to be increasingly necessary for the doctors to take an ever increasing interest in the politicians who run for office and in the bills they introduce, both nationally and locally.

Recently at a meeting of the Legislative Committee of the Medical Association of the State of Alabama it was suggested that the doctors in each county in the state entertain the Legislators from their respective counties. At these meetings the doctors will have an opportunity to get acquainted with the Legislators and to go over with them the type of state government, which, in their

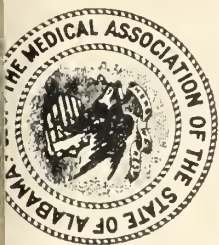
opinion, would serve the best interest, from a health standpoint, of all the people in the State of Alabama. This in my opinion is an excellent suggestion and will bring the medical profession in closer contact with the state government. This closer contact should be beneficial to all parties concerned, including the doctors, the Legislators and the people.

It has not been unusual down through the ages for a certain number of physicians to become vitally interested in governmental affairs. A total of three hundred and fifty-nine physicians have served in American Congresses since 1775, including thirty-five senators. Six physicians are now members of the House of Representatives of the Eighty-fifth Congress that convened in January. Five physicians signed the Declaration of Independence. Dr. Josiah A. Bartlett was the second person to sign the engrossed document at the formal ceremonies on August 2nd, 1776. He was forty-seven years old at that time. Puerto Rico's present Resident Commissioner is a physician—Dr. A. Fernos-Isern. He is a non-voting member of the House.

Three states, Alabama, Delaware and Ohio, had doctors as their first governors. Dr. William W. Bibb was Alabama's first governor. Governor Bibb served later both in the House and Senate of the National Congress.

Good government is a responsibility and duty of all good doctors—an obligation that they cannot afford to neglect.

Grady O. Segrest



ORGANIZATION SECTION

STATE BOARD OF CENSORS

This month you will be told in this section something of what is being done by the Board to further the work of the Association. Future issues will continue to bring you up to date until the point is reached where it is possible to report to you only on current activities.

MEDICARE

When Public Law 569 was passed and it became a certainty that the medical profession would have to set up a program under which it could be handled, the Chairman of the Board, Dr. Caldwell, appointed an interim committee composed of Drs. Robert Parker, John L. Branch and J. Paul Jones.

This committee held its first meeting on September 6. Since that time, the committee and the Board have spent many hours on this one segment of the Association's work. Under their guidance, the central office has been able to facilitate the work of the committee by disseminating information to the county societies and the counsellors and delegates, and by checking and tabulating information received from the counties.

After preliminary meetings of the committee, at which the law and its requirements were studied, a special meeting of the Association was called for October 7. Prior to this meeting date, background information was sent from the central office to counsellors and delegates; fee schedule forms covering approximately 275 items were sent to the various sections of the state with requests that they be completed; and plans were made to have the Department of Defense and interested insurance companies participate in the meeting.

The interim committee used the fee schedules which were completed and returned from over the state as the basis for a schedule to be submitted to the Association. Each item and the fees suggested by each section of the state were studied before the final draft was completed.

At the October 7 meeting, the Association voted to accept the Department of Defense program, to accept the abridged fee schedule as submitted by the interim committee, and to have the Medical Association of the State of Alabama act as fiscal agent for the program.

Representatives from Alabama then made a trip to Washington for the purpose of negotiating with the Department of Defense. These representatives were Drs. John L. Branch, E. V. Caldwell, D. G. Gill, Robert Parker, and G. O. Segrest, and the executive secretary. It was learned in Washington that a complete schedule of above sixteen hundred fees was required. The committee, working with the Department of Defense, prepared a schedule for presentation to the Medical Association of the State of Alabama. Some 9000 sheets were mimeographed, assembled and mailed from the central office, one complete schedule to each county medical society. The county societies were told that objections to the schedule should be in the central office before the next meeting of the State Board of Censors.

The Board approved the proposed fee schedule on December 6. The matter of the Association serving as fiscal agent was then discussed. Much time and effort had been spent by members of the interim committee between October 7 and December 6 in an effort to determine the best course of action to recommend to the Association. After discussions in Washington and a consideration of the responsibilities of the Association, its equipment and personnel, the committee reported to the Board that it did not recommend the Association's serving as fiscal agent. The Board approved the recommendation.

It was then necessary to call a second special meeting of the Association in order to rescind the action of October 7 which directed that the Association should act as fiscal agent. The meeting was called for December 16, at which time the October 7

action was rescinded and the Board of Censors was empowered to negotiate and enter into a contract pursuant to P. L. 569 and to designate a fiscal agent or enter into a contract wherein the Association is the fiscal agent.

The fiscal agent, or fiscal administrator as the Department of Defense now calls it, has been chosen. It is the Liberty Mutual Insurance Companies. Negotiations are not yet complete, but the Medicare program has been set up in Alabama. The required forms are in the central office and are being distributed upon requests. All phases of the program are being handled on an interim basis. It is hoped that by the time this *Journal* is in the mails, the Liberty Mutual Insurance Companies will have become the fiscal administrator in fact, as well as in name.

ADVISORY COMMITTEE

The Board of Censors, at the request of the executive secretary, has appointed an Advisory Committee to the Executive Secretary. The members are Drs. J. O. Finney, J. W. Simpson, and J. M. Weldon, with Drs. Douglas L. Cannon and D. G. Gill serving as ex officio members.

The internal organization of the Association is being divided into three bureaus: Administration, Medical Service, and Public Relations. The purpose of the division is to group under one bureau the committees whose work is interrelated, with one member of the Advisory Committee acting as guiding head for each group.

The majority of the committees that will be set up under the three bureaus already are active in the Association; a few are yet to be activated and have been included in the new program because there is a definite need for them.

Under the Bureau of Administration, the *Journal*, the rolls of the Association, the mechanics of annual and special sessions, the budget, and related activities will be handled. The responsibilities of the bureau will be broken into ten classifications which will include such committees as those on insurance, on A. M. E. F., and others when they are activated. Of course the physical handling of the administration work will remain in the central office.

In the second group are those committees which will deal primarily with medical

services. The committees on Maternal and Child Health, Cancer Control, Indigent Care, and several others have been operating actively, either as standing or special committees.

The third bureau, Public Relations, will be made up of three primary committees, one of which will be broken into ten subcommittees. Under the Committee on Public Relations will be placed the majority of the programs that now make up the work of the present Committee on Medical Service and Public Relations.

It is felt that the breakdown into bureaus and the regrouping of the committees will facilitate the work of the Association materially. The three bureaus will report to the State Board of Censors through the office of the executive secretary. This is another step toward spreading the work of the Association among a greater number of doctors and still having it funnel through the central office. There the materials can be coordinated and presented to the Board in a form that makes for easy handling of a great amount of background information.

As soon as the committees and bureaus have been organized, an organization chart will be issued so that every member of the Association may know what committee and what doctors are handling each phase of the program of his Association. When you are asked to serve on a committee, it is because your services are needed. Your work will tie in, first, with the other members of your committee, second, with every other committee of the Bureau under which you serve, and third, with the overall program and accomplishments of the Medical Association of the State of Alabama. Your work as a committee member is important, and you are urged to learn the requirements and fulfill them to the best of your ability.

TELECAST AND BROADCAST GUIDE

The Board of Censors has approved the recommendation which originated in the Subcommittee on TV, Radio and Press of the Committee on Medical Service and Public Relations. This recommendation was that the Association adopt the American Medical Association's Guiding Principles for Participation in Telecasts and Broadcasts. Printed below are the Principles as they apply to your State Association.

THE MEDICAL ASSOCIATION OF
THE STATE OF ALABAMA

GUIDING PRINCIPLES

FOR

PARTICIPATION IN TELECASTS AND BROADCASTS

(1) The Medical Association of The State of Alabama will participate in telecasts and radio broadcasts with commercial concerns but should not be presented as a joint sponsor of such commercial program. Inasmuch as the MASA is merely reviewing the script of the program with respect to accuracy of medical content, its participation should be designated as: "Produced in cooperation with The Medical Association of The State of Alabama," or comparable language.

(2) The Medical Association of The State of Alabama will in its sole discretion determine the programs in which it will participate. The MASA reserves the right to terminate its participation in any program whenever in its opinion further participation is not in the MASA's best interests.

(3) All scripts, including commercial advertising, shall be submitted to the MASA for approval within a reasonable time before the program is telecast.

(4) No visual presentation of a sponsor's product or the name of a sponsor's product should be made which includes either the name of the Association or any of its seals.

(5) In open circuit telecasts there shall be institutional advertising only; exceptions to this rule may be made, provided there shall be no advertisement of a specific drug or pharmaceutical. No medical claims for symptoms or diseases will be permitted.

(6) In closed circuit telecasts, product advertising may be permitted, subject to the same general controls as are laid down for advertising in the scientific periodical of the Association.

(7) Commercials presented should not include mention of the name of the Association or any statement that through "word association" could lead the listening public to believe that the sponsor or the sponsor's products are approved by The Medical Association of The State of Alabama.

(8) Where films are made for television or other use, with the intention that they will be sponsored from time to time by different organizations or companies, a contractual agreement should be made in writ-

ing which will give the Association the same right of sponsor acceptance as is required with a live program.

(9) No agreements with respect to any television or radio program should be made without legal review of the agreement prior to acceptance by the Association.

(10) Newspaper and magazine advertisements and other literature announcing any television or radio program in which The Medical Association of The State of Alabama has given its cooperation shall be first reviewed by the Association if that fact is stated specifically or referred to in any way. Such advertisements shall be reviewed only for the purpose of determining whether the format or language of the advertisement implies MASA approval of the sponsor or any of its products. Provision for the above shall be included in every agreement for MASA cooperation. All such agreements should be in written form and executed by the Secretary-Treasurer.

(11) No agreement with any producer or sponsor shall *preclude* a similar agreement with any other sponsor or producer.

THE MEDICAL ASSOCIATION OF
THE STATE OF ALABAMA

Adopted by The Board of Censors of the Medical Association of The State of Alabama, at its meeting in Montgomery, December 16, 1956.

The adult constitutes the great reservoir for childhood tuberculosis in this country, and the eradication of the disease in children stands or falls on acceptance or rejection of treatment by adults.—*Sidney H. Dressler, M. D., Am. Rev. Tuberc., November 1955.*

With adequate present-day methods of treatment of tuberculosis plus good obstetric care, pregnancy should rarely be accompanied by unfavorable progression of disease.—*Loren M. Rosenbach, M. D., and Columbus R. Gangemi, M. D., J. A. M. A., July 1956.*

Until well past the beginning of the present century the wide prevalence of open tuberculosis in most parts of the country was sufficient to account for continuation of the disease. For the past 20 years or more it has become increasingly important to consider the less obvious and precise sources of infection. No doubt the chief reservoir of infection consists of patients with positive sputum who, in spite of more general hospitalization and better public health supervision, continue to infect a certain number of immediate contacts.—*Alton S. Pope, M. D., and John E. Gordon, M. D., Am. J. Med. Sciences, September 1955.*



ASSOCIATION FORUM

MEDICAL NEEDS OF PEOPLE

Following is a section of the Annual Report of the State Department of Pensions and Security for the Fiscal Year 1955-56. Since members of the Medical Association frequently come into contact with the health and medical care of the needy in Alabama, it is thought that the facts and comments in the report will be of interest to the majority of the JOURNAL readers.



All persons—even if in good health—are likely to need at least some medical care every year. Persons dependent on the Department of Pensions and Security are old, young, disabled, or blind. For these groups, therefore, there is an obvious need for medical care. Few people reach 65 without some sort of disability. Some are senile and some require nursing care. Children's health demands regular attention if they are to grow into able-bodied adults. With almost no exception, a totally and permanently disabled person should have some medical and also probably nursing care. In addition, needy people frequently have lived for a long time on marginal incomes. This means that they may have un-treated ills and other health problems when they come to the agency.

With these facts in mind it is of grave concern to the Department that needy persons are not getting the medical and nursing care they need. Under present policies, with the exception of essential hospitalization up to a low maximum, only \$10 per month can be included in a person's budget for medical care. This is for general medical care and is limited to urgent medical needs. At present this medical care or hospitalization must come within the maximum Federal matching payment. Thus, if a person's unmet need for basic essentials called for a maximum

payment, an allowance for such medical care might not affect his grant. The maximum can be exceeded by using State funds only to provide care in a licensed nursing home.

The Federal government has taken some action toward improving medical care for the needy. The 1956 Social Security Amendments included provision for Federal sharing in costs of medical care of assistance recipients, in addition to participation in regular payments to the aged, the blind, the permanently and totally disabled, and dependent children. Effective in July, 1957, this measure requires the State to pay half the cost, with the Federal government matching dollar for dollar up to \$6 monthly for each eligible adult and \$3 monthly for each eligible child. Additional monies will be needed to take advantage of the Federal program of medical care for recipients.

Another grave problem in Alabama is the lack of public nursing care facilities. Private institutions are limited in number, and the cost of care is beyond the income of many who need such care. Under the Federal hospital construction program only \$4 million is allocated per year for nursing homes, with Alabama's share of this just a little more than \$100,000. In 1956 the amount allocated under the original program of the Hill-Burton Act was raised 15 percent, but there was no increase in the amount allocated for nursing homes.

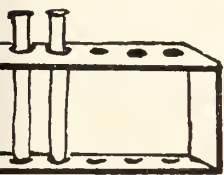
While about half the residents of nursing homes were public assistance recipients at the time of the 1954 study, county directors have estimated a much higher number of recipients, primarily the aged, to be in need of institutional nursing care. They do not receive such care usually because there is no bed available in a home where charges are within the amount the Department can allow, and the family has no resources to supplement this amount for more expensive private care. For example, in complet-

ing a recent questionnaire on services to the aged, one county department reported the number in need of nursing care as 25, the number receiving it, six. Others estimated 45 and 41 needing it and only three and five respectively receiving it.

Thus, the lack of adequate public medical care facilities in Alabama has two particularly critical aspects. First, dependency and disability result when persons with low or no income cannot get early care and treatment, and, second, needy people often suffer from lack of essential medical and nursing care services. The first problem tends to increase the number receiving aid to the permanently and totally disabled and aid to dependent children, and consequent costs to the State. It would be to the advantage of every citizen for Alabama to de-

velop a public medical care program including clinics and hospitals for the indigent, a plan for financing medical services to the needy, and public nursing care facilities.

The 1956 Legislature, in Special Session in April, adopted a Joint Resolution on the subject of indigent medical care. Under the terms of this Resolution a Commission to be composed of five legislators was appointed "to study the need for an indigent medical care program in Alabama and laws pertaining thereto, to study what other states have done in developing indigent medical care programs, and to make recommendations" to the 1957 Legislature. The Department of Pensions and Security is co-operating with the Study Commission, as are the Alabama Hospital Association, the State Health Department, and other appropriate public and private groups.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

DIABETES TODAY

Contributed by

Martha Terry, Director

Division of Public Health Education

Clinton P. Anderson is a United States Senator. Bill Talbert is a Davis Cup tennis player. Dr. Seth W. Shields is a dentist and anthologist. Morris Charlap is a noted composer. Alice Brown takes care of her home and three children. John Anderson is an accountant with a large practice. Aside from the fact that they're all busy, successful people, it doesn't sound like these six have a whole lot in common, does it? They do have a bond, though. All six have diabetes mellitus.

The first four are real people, well-known in their chosen fields. The last two have fictitious names, but people who fit their descriptions could be found among the approximately one million known diabetics in this country. Each of the six is proof, as are thousands of others, that diabetes need

not be a disabling disease. Its victims can work, play, live, much like the rest of us. There's no way you could pick one of them out in a crowd.

Thirty-five years ago these remarks about diabetes would not have been true. There was a considerable body of knowledge about the disease, but no effective treatment. What amounted to a starvation diet was all the doctor could prescribe. Victims of severe diabetes seldom lived more than four or five years after developing the disease. They were likely to become complete invalids during that four or five year period. Those who had the disease in milder form may have lived to the normal life expectancy, but they were apt to develop complications which can be avoided now.

The outlook for the diabetic today is not so gloomy. In the early 1920's Banting and Best discovered a way to extract insulin from animal pancreas and to use it for human beings. Their discovery added years to the life of the diabetic. Equally important, they added life to the years! The significance of their discovery is seen when we consider what diabetes is and how it affects its victims.

Diabetes is a chronic disorder characterized by a deficiency or lack of insulin in the body. Insulin is produced by the pancreas, a gland lying behind the stomach. The pancreas in the diabetic is usually functioning improperly. Other glands, however, may have a bearing. The adrenal gland, the liver, the thyroid, and the pituitary can influence the disease. Obesity seems to have a bearing on its development, particularly among the middle-aged and elderly. The exact cause of the disease is not understood and cannot now be treated.

The effect of the condition—that is what results from the lack of natural insulin or the inability to utilize it—can be dealt with. The body must have insulin to change sugars and starches into energy or to store them for future use. The diabetic cannot make full use of these foods. The sugar—and starches are changed to sugars in the body—goes into the blood instead of being converted for use by the muscles and other tissues. This causes the kidneys to work harder trying to remove the excess sugar from the blood.

This process gives rise to the classic symptoms of diabetes: hunger, thirst, and excessive urination. The diabetic is hungry because he does not use his food. He may eat ravenously, but such eating does not furnish the fuel his body demands. That is why many diabetics lose weight rapidly. When the kidneys try to remove the excess sugar from the blood, frequent urination occurs. The frequent urination causes thirst as the body demands replacement of the fluid it has lost. These three symptoms are found in most severe untreated cases of diabetes. Any person in whom they are present should consult a physician immediately.

There are other symptoms such as slow healing of cuts and scratches, bodily itching, and changes in vision. These, too, are signs that medical advice should be sought. The symptoms do not appear in all cases of diabetes. A person with mild diabetes may just feel tired and “run-down,” or he may have no indication that anything is wrong.

We have said that the effects of diabetes can be controlled. The doctor will rely on three things to achieve this control—diet, insulin, and exercise. One writer calls these the “Big Three” for diabetics. Perhaps we should add a fourth—that is the patient’s

understanding and acceptance of his own responsibility in the management of his condition.

Management of diabetes cannot be undertaken without medical supervision. No two people will require exactly the same treatment. The doctor must decide on the basis of individual need what the dietary, insulin and exercise requirements are. After he has determined what these control measures are to be, their implementation is largely up to the patient. He will need continued medical supervision, but it is up to him to follow his diet, to take his insulin injections, and to get his exercise. The doctor cannot follow him around to make sure that he does.

The diet for today’s diabetic is a far cry from the slow starvation of earlier days. Nutrition discoveries and changing viewpoints have influenced the type and amount of food the diabetic can eat. The avoidance of overfeeding is the fundamental principle in the diet for this condition. It is estimated that approximately one-fourth of the cases of diabetes can be controlled by diet alone. The remainder require daily injections of insulin.

The diabetic who accepts his own responsibility and cooperates with his doctor to achieve and maintain control of his condition has nothing to fear. He can be like the six people we talked about earlier.

The picture is different for the diabetic who does not give careful attention to the diet, insulin, and exercise which are prescribed for him. His condition will interfere with his chances for a normal life. In addition, there are complications which may develop.

Among these complications are acidosis and diabetic coma. The body’s failure to burn sugars and starches results in excessive breakdown of fats. This causes the production of ketone acids in amounts greater than the body can use. Acidosis, which causes diabetic coma when it is not treated, then develops. Death may result unless there is immediate, skillful medical care.

Another complication is arteriosclerosis or hardening of the arteries, which seems to develop earlier in the diabetic than the non-diabetic. Gangrene, and eye trouble, associated with the retina, which may lead to blindness are others. The diabetic should not worry about these complications, but

an awareness of them underscores the importance of good control of his diabetes. He should realize that they can be delayed or prevented by careful attention to diet and insulin.

Not only can today's diabetic live normally—he can take heart for another reason. Research did not cease with the discovery of insulin. Scientists are still trying to find the exact cause of diabetes. When they find the cause, they may be able to find a cure. They are trying to develop better methods of treatment. For instance, there have been reports recently of a "pill" to take the place of insulin injections. Tests of these "pills" have not produced the encouraging results we could wish for. What is encouraging about the report is the realization that science still considers diabetes a problem which demands research.

Diabetes is still a problem to the medical profession and to public health authorities for another reason. We have already said that there are about one million known diabetics. It is estimated that there are at least that many more who have diabetes and do not know it. Some studies indicate that 2% of our total population are affected. The problem is to locate these unknown cases so programs of control can be started. This problem is one all of us can help to solve.

These undiscovered cases of diabetes exist in all segments of our population. Diabetes can develop at any age in either sex. Women are more prone to develop the disease, however, particularly women past middle age who are overweight. The incidence rises sharply for both sexes after 50, but more sharply for women than for men. Those who have a family history of diabetes are also particularly susceptible. One cannot inherit diabetes itself, but the tendency to develop it apparently is an inherited characteristic.

Since symptoms are not always present, it would be well if routine physical examinations included tests for diabetes. The person who is overweight or who had diabetes in his family should request such tests periodically. As we have said, anyone with suspicious symptoms should seek medical advice immediately.

By having periodic medical check-ups and by seeing our doctors when symptoms are present, we can help to detect the unknown cases and avoid the consequences of untreated diabetes.

Tests Show Chewing Tobacco's Effect on Body—Heart researchers have provided some new information for doctors wishing to advise their patients about the effects of chewing tobacco on the circulatory system.

Although 81 million pounds of chewing tobacco are consumed annually in the U. S., practically nothing is known about its effect on the body. However, four Cincinnati researchers now have conducted a series of tests on men who habitually chewed tobacco. They reported their findings in the February 2 Journal of the American Medical Association.

They found that chewing tobacco produced changes in the body similar to those caused by smoking cigarettes, including increases in pulse rate and blood pressure and a decrease in skin temperature. It also produced changes in the ballistocardiograph, which measures the impact on the body of the heart's thrust as it pumps blood. Smoking did not produce ballistocardiograph changes.

The 24 men, ranging in age from 34 to 71 years, chewed low-nicotine tobacco or a regular commercial brand. Some also chewed gum for comparison.

After chewing commercial tobacco, the pulse rates of 14 men increased markedly, with an average increase of 13.4 beats a minute. With low-nicotine tobacco, the rate remained constant in three men, decreased in one and increased by an average of 6.5 beats a minute in nine men. After chewing gum one man showed a slight rise and one a slight fall.

All showed definite increases in blood pressure after chewing commercial tobacco.

In most of the men the pattern of skin temperature changes was similar to that reported in cigarette smoking studies. Forehead temperatures remained nearly constant with both types of tobacco and gum, but temperatures in the fingers and toes decreased after chewing tobacco.

The ballistocardiograph changes, which were recorded in 23 men, were the greatest about 15 minutes after chewing began. Younger men who smoked in other studies did not show such changes.

The possibility that more nicotine is absorbed by the body during chewing than during smoking might explain these changes in the older men, the authors said.

The average amount of tobacco chewed contained about 10 times more tobacco than the standard cigarette. In addition, the tobacco was held in the mouth longer than cigarette smoke usually is. It is estimated that more than two-thirds of the nicotine in cigarette smoke is absorbed through the membranes of the mouth.

Conducting the research, which was supported by a grant from the Tobacco Industry Research Committee, New York, were Dr. David L. Simon, Dr. Arnold Iglauer, Dr. John Braunstein and Robert E. Rakel of Cincinnati General Hospital and Kettering Laboratory, University of Cincinnati.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

November 1956

Examinations for diphtheria bacilli and Vincent's	249
Agglutination tests	632
Typhoid cultures (blood, feces and urine) ..	457
Brucella cultures	5
Examinations for malaria	44
Examinations for intestinal parasites	2,533
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	21,308
Examinations for gonococci	1,328
Examinations for tubercle bacilli	2,914
Examinations for Negri bodies	107
Water examinations	1,695
Milk and dairy products examinations	4,549
Miscellaneous examinations	2,738
Total	38,563

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BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	Oct.	Nov.	E. E.* Nov.
Typhoid and paratyphoid	5	2	2
Undulant fever	1	0	3
Meningitis	9	11	9
Scarlet fever	227	223	76
Whooping cough	24	59	54
Diphtheria	25	13	51
Tetanus	3	1	4
Tuberculosis	168	111	185
Tularemia	0	1	1
Amebic dysentery	3	3	1
Malaria	0	1	10
Influenza	30	111	270
Smallpox	0	0	0
Measles	135	209	73
Poliomyelitis	22	15	14
Encephalitis	4	1	0
Chickenpox	5	167	62
Typhus fever	1	0	1
Mumps	65	53	47
Cancer	377	452	347
Pellagra	0	0	1
Pneumonia	145	159	125
Syphilis	115	125	360
Chancroid	1	5	9
Gonorrhea	313	287	340
Rabies—Human cases	0	0	0
Positive animal heads	21	18	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATIS-

TICS, AND COMPARATIVE DATA

FOR SEPTEMBER 1956

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During September 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births	7590	4679	2911	28.3	28.2	28.8
Deaths	2093	1214	879	7.8	7.4	7.3
Fetal deaths	148	66	82	19.1	19.6	20.6
Infant deaths— under one month	158	84	74	20.8	22.2	21.9
under one year	218	104	114	28.7	27.3	29.2
Causes of Death						
Tuberculosis, 001-019	19	5	14	7.1	8.6	13.3
Syphilis, 020-029	6	2	4	2.2	2.2	3.4
Dysentery, 045-048	2		2	0.7		
Diphtheria, 055					1.5	
Whooping cough, 056					0.8	
Meningococcal infections, 057						0.4
Poliomyelitis, 080, 081					0.8	0.8
Measles, 085	1	1		0.4		
Malignant neoplasms, 140-205	284	198	86	105.8	95.4	100.2
Diabetes mellitus, 260	26	13	13	9.7	4.9	6.8
Pellagra, 281					0.4	0.4
Vascular lesions of central nervous sys- tem, 330-334	253	147	106	94.3	97.2	94.5
Rheumatic fever, 400- 402	1		1	0.4	1.9	0.4
Diseases of the heart, 410-443	684	426	258	254.8	237.3	222.9
Hypertension with heart disease, 440- 443	145	60	85	54.0	46.6	50.5
Diseases of the arteries, 450-456	40	22	18	14.9	15.0	12.5
Influenza, 480-483	2	1	1	0.7	2.2	1.1
Pneumonia, all forms, 490-493	57	36	21	21.2	13.1	14.4
Bronchitis, 500-502	3	1	2	1.1	1.1	2.3
Appendicitis, 550-553	2	1	1	0.7	1.1	1.1
Intestinal obstruction and hernia, 560, 561, 570	12	5	7	4.5	3.4	5.7
Gastro-enteritis and colitis, under 2, 571.0, 764	10	3	7	3.7	4.9	4.6
Cirrhosis of liver, 581	12	5	7	4.5	5.6	5.3
Diseases of pregnancy and childbirth, 640- 689	6	4	2	7.8	9.1	10.3
Congenital malforma- tions, 750-759	37	24	13	4.9	3.6	3.8
Accidents, total 800- 962	152	87	65	56.6	42.1	53.2
Motor vehicle acci- dents, 810-835, 960	84	49	35	31.3	24.4	25.4
All other defined causes	416	212	204	155.0	157.0	145.1
Ill-defined and un- known causes, 780- 793, 795	68	21	47	25.3	25.9	30.7

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

March 1957

No. 9

SOME PROPOSED SOLUTIONS FOR PROBLEMS ASSOCIATED WITH SURGERY ABOUT THE BLADDER NECK

John Dougherty, M. D., F. A. C. S., F. I. C. S.
Knoxville, Tennessee

This paper is not conceived with the idea of bringing to you anything particularly new, nor is it expected to advance to you a discussion of the more complicated problems met with in removing obstructions to the bladder neck. Its value, if any, will be in restating old principles and describing a few innovations that have been found worth while.

THE PREPARATION OF THE PATIENT

In modern surgery it is almost platitudinous to say that every effort should be expended in improving the risk status of a patient. In urology, more, or certainly as much as in any other branch of surgery, the opportunities to do this are unusually great. No longer is it permissible to assume the attitude that the patient neglected himself and became a poor risk; so that part of the responsibility is removed, and the surgeon need not go into such detail in attempting to make him a better candidate for surgery. The day has passed when one can conscientiously say, after a case has been lost, that the patient came too late and was too far gone.

If we diligently apply all the corrective measures that we know in the preoperative, the operative, and postoperative course of surgery, we cannot help but greatly improve the poor risk patient to a status where definite correction is possible. Factors to be subsequently outlined in this paper, it is

believed, will help to do this to an appreciable degree. In bringing them to you, one asks for your indulgence.

THE PREOPERATIVE EVALUATION OF THE PATIENT

It is believed you will agree that the patient who has had an inadequate preliminary study and inefficient preparation has a decreased chance of getting a good result, particularly when this is coupled with an inadequate operative set-up.

One should like to offer the obvious premise that all patients with bladder neck obstructions be completely and thoroughly studied. In addition, the urologist should have a thorough knowledge, directly gained, of the respiratory, vascular, and the neurologic potentialities of the patient. This means going over the patient with a complete preliminary physical survey.

It is advocated that the operator, himself, or his first-hand assistant, should gain the knowledge of these systems directly. A consultant is good, but he cannot share the responsibility for the patient whose vital capacity should have been improved, or whose intrinsic factor and vibratory sense may be so dissipated that holding urine after a resection would be impossible. Without taking too much of your time, one should like to advance some of the things used in a system to prepare a patient for surgery about the bladder neck. After a complete physical survey, which includes a gross estimate of the psychic, the respiratory, cardiac, vascular, gastro-intestinal, and the neurologic systems, the patient is studied from the urologic standpoint. One

Prepared for presentation before the Ninth Annual Assembly, Alabama Surgical Division, U. S. Section of the International College of Surgeons, in conjunction with the Tuscaloosa County Medical Society, Tuscaloosa, Oct. 31, 1956.

feels that if this examination is carried out with care that there will be no untoward effect, and the value to be derived from it by the patient and the doctor far outweigh any reason for not carrying out the procedure.

Following this, the patient is admitted to the hospital and prepared over a two-day period for surgery. During this preliminary hospital stay, deep breathing and semi-bicycle exercises are carried out, according to the ability of the patient, for ten minutes every two hours during the waking period. B_{12} is given daily and ascorbic acid in concentrated doses. A preliminary two-day dosage of sulfathalidine will greatly decrease postoperative distention. Since most of these surgical procedures are done under spinal anesthesia, one prefers to give blood while blood loss is taking place, properly protected by antihistamine. The reasons are obvious.

**SIMPLE MECHANICAL INNOVATIONS
FOR FACILITATING SURGERY
ABOUT THE BLADDER
OUTLET**

Innovation # 1: A frequently met problem for the urologist who does not limit himself to one type of procedure, but who in private practice must do varied types of prostatic surgery, and who cannot confine himself to working in one institution, is the perfecting of a technical plan that can be easily and quickly understood by nurses, interns, assistants, and orderlies. If one operates in several small hospitals, he may not have any assistants at all or the same assistants on any two occasions. For this reason the operator must, for the sake of safety, facility, and expeditiousness, have his technical equipment as simply contrived as possible. Most commonly, the only table available is the standard operating room table. In order to work freely on such a table, the device which you see in figure 1 has

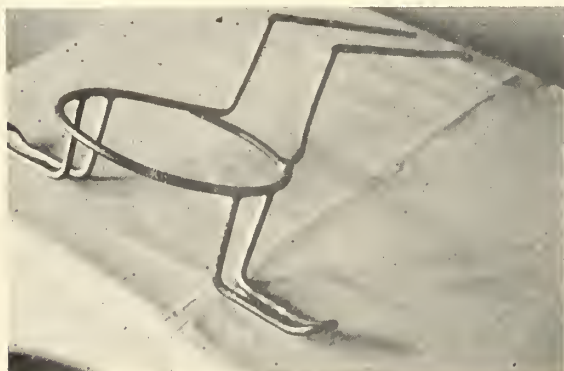


Fig. 1

been devised. It is perfectly simple, inexpensive, and invaluable. The two long prongs slide under the mattress and the circular portion protrudes from the end of the table under the patient's perineum. The side arms, which you see, are elbow rests which greatly decrease the fatigue that can be experienced in the second of two resections if one is fortunate enough to have so many on the same day. This simple addition provides the operator with the patience to achieve better hemostasis, and a cleaner removal of tags that may be poorly dealt with by the tired surgeon. The advantages of this simply contrived mechanism are obvious.

Innovation # 2: In years passed, it seemed to the author a waste of time and a messy unsurgical annoyance to have someone thrusting a tea strainer by your nose to catch particles as the bloody fluid from the distended bladder gushed out of the resectoscope when the loop was removed. In order to avoid this, so that whatever assistance was available could do more valuable things, the next contrivance, figure 2, was



Fig. 2

brought into use. It is simply a large funnel made to fit the rack and with a separate strainer, figure 3, that can be tilted and moved about in order to adapt it to any drainage from the resectoscope or catheter. A gauze pad in the bottom of the strainer collects all particles neatly and efficiently. The drainage pours through the funnel and its tube to a collecting vessel on the floor.

In some operating rooms the drainage could be continued on through a floor drain. This, however, removes the necessary information that the operator needs constantly to keep in mind regarding blood loss. In order to obtain this information at any time,



Fig. 3

it is advisable to have the drainage collected in a large vessel on the floor, as most of us do. This set-up, as you can easily see, allows the operator to stay dry, does not require the use of an apron, and affords the appearance of a surgical procedure rather than one in which the operator appears as though he has just finished a blood bath. It also decreases the danger of electrical short circuits resulting from a wet floor.

Innovation # 3: The care of the bladder and upper urinary tracts throughout the procedure, it is believed you will agree, offers a formidable problem, and one about which all of us may become neglectful. Concern with the formation of methemoglobinemia, the over distended bladder and urethra, and the possible retrograde extension of infectious material, or shock producing fluid to the more susceptible upper urinary tracts, stimulated efforts to devise some means of completely correcting these persistently dangerous features in resective surgery. For this, the author claims no originality. Instruments which have been in use for years have simply been applied. Indeed, the trocar and the straight catheter guide have been in use so long that the originator of these very important urologic instruments has been lost from recognition.

The technique is as follows: As soon as the anesthesia, usually low or continuous spinal, becomes effective, a #28 sound is passed through the urethra into the bladder. This facilitates the passage of the resectoscope. The latter instrument is introduced and the bladder distended, the viscus can then be palpated and an estimate gained of the position of the peritoneal resection. When the bladder has reached a height of 3 centimeters from the umbilicus, it has been felt that the procedure was entirely safe.

A 0.5 centimeter vertical incision is made through the skin and fascia at 1.5 centimeters above the symphysis in the midline. An aspirating needle can be introduced, if desired, but is hardly necessary. A #26 trocar, which you can see in figure 4, was



Fig. 4

especially made on order. It works better since it was found that smaller trocars did not provide for the large catheters which later became desired. The trocar is introduced and passed directly down into the bladder at an angle of approximately 80° to the upper part of the bladder. A remote danger is that a large anterior lobe of the prostate might be hit and cause unnecessary bleeding; however, the knowledge previously gained of the interior of the viscus will dictate the direction by which the trocar should be passed. On reaching the interior of the bladder, the obturator is pulled up so as not to endanger the bladder floor, and the trocar sheath pushed all the way down. The obturator is removed and a #26 Irrigation Drainage Malecote catheter on a straight stylet is introduced into the bladder through the trocar. This catheter was especially manufactured by Bard In-



Fig. 5

strument Makers. The trocar is then removed and the catheter left indwelling. It can be adjusted to the proper level in the bladder so as not to interfere with the resection and to facilitate its future usefulness. It is then anchored to the skin. The irrigation portion of the catheter is clamped off, and the drainage tip is connected to a drainage tube leading to a bottle placed on a level with the patient's bladder (figure 5). The resection is then begun and the advantages are manifold. Some of them are:

1. A constantly clear view, no matter the amount of bleeding, is always possible.
2. It is not necessary to stop the resection to remove the bloody sludge from the bladder.
3. The particles drop easily on the floor of the bladder and remain there much as they do in an Ellik evacuator. In fact, the idea for this came about in observing the efficiency of operation performed by the evacuator.
4. Air bubbles are eliminated even if they enter the system by the failure of an assistant to fill the reserve reservoir quickly enough.
5. The operator can obtain definite information of the amount of blood loss at any time by observing the outflow through the suprapubic tube and in the collecting jug.
6. The bladder need not ever be over-distended, nor is it ever collapsed enough to endanger it through manipulations of the resectoscope; rather its degree of distention can practically be maintained constantly.
7. Much valuable time is saved and the resection becomes the procedure for which it was intended to relieve the patient.

Not only does the suprapubic punch tube provide many advantages during the course of the resection, but it, also, offers advantages during the postoperative period. It provides for drainage and irrigation of the bladder in case there is bleeding, and, if it is necessary, to use the Foley bag as a pressure hemostat. In addition, it affords early removal of the urethral tube and exercise of the voiding mechanism. All patients do not void well immediately after resection. This can certainly be said about my own, particularly if they have some neurogenic deficiency or have had vas ligation. For them the suprapubic tube affords an escape for infected residual urine until efficient

voiding is established. It affords even earlier ambulation, and particularly more restful nights during the early days of attempted voiding. For the first few postoperative nights, during which voiding is being established, the patient need not sleep with a urinal but may simply have his suprapubic tube open, gain a restful night, and be ready to resume the process of learning to void again the next morning. Since the institution of the suprapubic tube, knowledge has been gained of how inefficiently many hemostatic bag catheters of the indwelling urethral type actually afford drainage. Their efficiency is not nearly so great as one might think and it is believed that this factor often accounts for some of the unnecessary trouble that a patient experiences after a resection.

It is realized today that some surgeons advocate no irrigation of the bladder at all. They feel that if the resection has been done correctly, that there should be no bleeding, and that drainage alone is all that is necessary. For large institutions, this may be justified, particularly where there is an assistant nearby on constant call; however, in the type of work which some of us find necessary to perform in a number of small institutions there can be no dealing with chance. Everything adequate for the needs of the patient must be anticipated and provided for in advance.

Innovation # 4: This procedure is quite simple, and one is certain that many of you use it regularly. However, it is believed to be worth mentioning. It has been found that the lubrication of indwelling tubes and instruments, particularly those passing through the urethra, with Phisohex greatly decreases the incidence of local infection, and subsequent granulation with stricture formation. This affords the same advantage as lubricating jelly, in addition, to those mentioned above.

Innovation # 5: In some hospitals the patients are removed from the operating table to a stretcher and carried to their room. The disadvantages of this are obvious; some of them are: The patient is exposed more than is necessary, the previous adjustment of tubes and the dressings might be lost, and the movement enhances the opportunity for new bleeding. In addition, on reaching his room the patient is usually moved from the stretcher to the bed by an inadequate number of people who are not familiar with

what took place a short time before in the operating room.

To circumvent these unnecessary disadvantages, the operator has the bed brought from the floor into the operating room. The patient is then moved into it at the termination of the procedure with some recognition for his safety, and with all appliances properly connected and ready to work as soon as the bed is returned with the patient to his room. The advantages of this are too obvious to take more of your time in explaining them.

Innovation # 6: The problem of irrigating the patient during the postoperative stage required solution. The contrivance which has been satisfactorily used offers many advantages, and I am certain that it has been used by all of you. Still one can go on some hospital wards and find an orderly irrigating catheters with rubber bulb syringes and naked hands. The system which has worked efficiently is a closed one. The ordinary 1,000 cc. Vaculitre bottle is used. It is connected to the irrigating tip of the suprapubic tube and whatever solution desired is run in at the rate of 25 drops per minute. This can be increased or decreased as needed. In this work, distilled water has proven satisfactory. The drainage tips of the suprapubic tube and the Foley urethral catheter are run into bottles below the bed which are, also, provided with gauze covers to prevent contamination. The period of time necessary for the use of the system depends on the period of bleeding in the early postoperative stage; usually 24 to 48 hours is all that is necessary. There is no opportunity for the introduction of infection and the patient is comfortable. Sufficient tubing is left on the bed level for the patient to turn freely, and from the edge of the bed to the neck of the collecting jug only an adequate length of tubing is allowed by pinning it to the bed linen.

Innovation # 7: The addition of an ingredient to the irrigation fluid of an isotonic nature to provide an additional safety factor has been considered. With the use of the indwelling suprapubic tube the danger of hemolysis from over-distention and the use of a non-isotonic solution has been nil. However, the cost is negligible and the use non-complicating, so in the past year I have incorporated the use of agents such as Cytol.

Innovation # 8: Dr. Louis Devanney, with whom I am presently associated, supplied

the idea for the last innovation. Operating transurethraally from a fixed position, sitting on a hard surgical stool without rollers can become most fatiguing and bottom hardening. The institution of a modern, ordinary stenographer's chair has changed this. The chair has a three inch foam rubber cushion, a back, a seat level adjustment, and bearing casters that relieve all the tedium of a fixed position. The operator can move quickly at ease and there is not the insecure sense of danger inherent in adjustable small cushioned seat roller stools manufactured for other specialties and used at times in urology.

SUMMARY

Eight innovations used in the work of surgical correction of obstructions at the bladder neck have been presented. These innovations have solved the problems of the operator carrying out urologic procedures in a number of small hospitals in cities distant from his place of active practice, and in the hospitals in the city where his active practice is carried on. They have solved a number of technical and clinical problems that were a constant source of irritation to the operator, and danger to the patient, in addition to saving much valuable time. They are not presented as original ideas for which one should be given any particular credit, for it is realized that many of you possibly use the same devices or better ones in your own practice. They are presented more because, in a way, they seem to facilitate the work and the solution of the problems dealing with obstructions at the bladder neck!

CONCLUSIONS

It is believed that the application of the measures described above facilitates the technique of resection, saving time, providing tidiness, removing the bloody puddle often seen on operating room floors, advancing greater safety for the patient, and affording him a quicker and less morbid return to normalcy.

517 West Cumberland

It is generally accepted that tuberculosis is the most common cause of pulmonary cavitation. That tuberculosis is a frequent occurrence in third-stage silicosis is evident when one considers that over 50% of the conglomerate masses are said to be infected with tuberculosis. Thus, when cavitation occurs in a conglomerate mass, it is usually presumed to be of tuberculous nature. However, the occurrence of nontuberculous cavitation must not be overlooked.—*Morrow and Armen, Ann. Int. Med., Oct. '56.*

TOTAL APPENDECTOMY

WALKER REYNOLDS, JR., M. D., M. S. (Surg.)

Anniston, Alabama

The morbidity and mortality rates of acute appendicitis have been on the decline for the past fifty years due to improvements in anesthesia, antibiotics, fluid and electrolytes, early mobilization and public education.¹ Yet, during this same period, there has been little change in the technique of appendectomy. An appendectomy as performed today, with the accepted techniques of ligation, ligation with inversion or inversion without ligation, is a subtotal removal of the appendix with a portion of the proximal end left behind. Although the remaining appendiceal stump rarely causes complications, there are cases on record in which it has been the source of adhesions, granulomas, diverticula and abscess formation.^{1,2,3} Therefore, the author feels that in our quest for continued improvement in our morbidity and mortality rates the technique of appendectomy as performed today should be examined. Why should any portion of the appendix be left behind? It serves no useful function and is a possible source of complications. It can be removed safely.

SUBTOTAL APPENDECTOMY

The fact that the technique of appendectomy still remains a controversial issue implies that all common methods today have not only their advantages but disadvantages as well; hence, there is no universally accepted method. The various methods of treating the appendiceal stump have previously been described in detail by Ochsner and Lilly,⁴ Bancroft,¹ and Horsley.³

A summary of the advantages and disadvantages of the various methods are listed in outline form based upon the writings of the authors mentioned above.

From the Department of Surgery, Anniston Memorial Hospital.

1. Bancroft, F. W.: Forty Years Experience in Acute Appendicitis, S. Clin. North America, 411, 1955.

2. Deaver, J. B.: Remarks Upon Some Points in the Technique of the Operation for Appendicitis, Ann. Surgery 27: 78, 1898.

3. Horsley, G. S., and Bigger, I. A.: Operative Surgery, St. Louis: C. V. Mosby Co., 1953.

4. Ochsner, A., and Lilly, G. S.: Technique of Appendectomy, With Particular Reference to Treatment of the Appendiceal Stump, Surgery 2: 532, 1937.

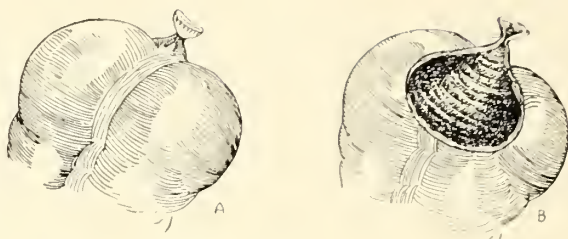


Fig. 1. Simple ligation.

A. The stump of the appendix has been tied and the remainder of the appendix removed. The remaining stump is subject to necrosis at its distal end and may become a source of contamination.

B. The sectional view shows the proximal end of the stump which may become a diverticulum or the site of a secondary appendicitis due to a fecalith lodging in the space.

I. *Simple Ligation:* (Fig. 1)

Advantages:

1. Rapid procedure.
2. Hemostasis is secured by the ligature.
3. Prevents burying an infected stump in a closed cavity.

Disadvantages:

1. Inadequate closure of the bowel is likely to be secured because serosa is not brought into apposition with serosa.
2. The ligated stump, which many times is infected, lies free in the peritoneal cavity and can be a source of contamination.
3. Adhesions are likely to occur around the ligated stump.
4. The incidence of fecal fistulas, persistent sinuses, peritonitis and intestinal obstruction are high following this method.
5. "Blowing out of the stump" has occurred, resulting in a fatality using this method.
6. Secondary appendicitis may occur at a later date due to a fecalith lodging in the stump of the appendix.

II. *Ligation with Inversion of the Appendiceal Stump:* (Fig. 2)

Advantages:

1. Peritonealization is accomplished.
2. Hemostasis is secured.



Fig. 2. Ligation with inversion of the appendiceal stump.

A. This figure shows the cecum with the purse string suture in place. The appendiceal stump has been ligated and inverted.

B. The sectional view shows the stump after inversion. The following is noted: (1) the blood supply is cut off by the purse string suture. (2) there is a closed cavity containing necrotic tissue. This situation may lead to abscess formation, granulomas or diverticula formation.

Disadvantages:

1. Adhesions may result from peritoneal reaction secondary to the inflammatory process of the cecum.
2. There is danger of abscess formation with rupture into the cecum or peritoneal cavity.
3. Granulomas may develop.
4. Cecal diverticula have been reported.

III. *Inversion without Ligation:* (Fig. 3)

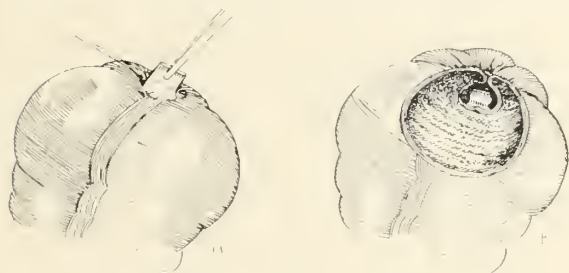


Fig. 3. Inversion without ligation.

A. The crushed appendix is being inverted. There is a danger of contamination by leakage during maneuver.

B. The sectional view shows the crushed end of the appendix lying within the cecum. There is a possibility of hemorrhage into the cecum from a branch of the appendiceal artery. The necrotic stump may cause an inflammatory reaction in the cecum during the process of absorption thus prolonging healing.

Advantages:

1. Danger of abscess and inflammation about the stump is less likely.
2. Peritonealization is accomplished.

Disadvantages:

1. Possible postoperative hemorrhage into the cecum due to inefficient

hemostasis of a branch of the appendiceal artery.

2. Danger of contamination by leakage when the stump is being inverted.

It would appear that in all of the methods of subtotal removal of the appendix the remaining stump presents theoretical if not actual problems. Therefore, if total removal of the appendix could be accomplished technically without the resultant hazards of fecal contamination, hemorrhage or abscess formation, it would appear to be the most logical method of removing an appendix.

TOTAL APPENDECTOMY

In reviewing the literature on the subject of the handling of the appendiceal stump, it was noted that, in 1898, Deaver² advocated total appendectomy as follows: "In the treatment of the stump my practice for a long time has been to excise the appendix, cutting it completely out of the cecum with a pair of curved scissors. It is just as simple to close a wound in the cecum and often simpler than to close a wound in the wall of the intestinal canal elsewhere, the result of other causes. What suggested this form of treatment to my mind was the infection of the walls of the cecum, the result of embedding into it the base of the diseased appendix. I have seen abscesses in the wall of the cecum as a sequel of the latter method of treatment of the stump; hence, I shall not argue further in its favor."

Deaver described his technique in more detail in his book, *Appendicitis*,⁵ published in 1905 (Fig. 4). "When the appendix is thus freed of its mesentery the surgeon carefully grasps the cecum between the thumb and index finger of his left hand close to the base of the appendix and cuts the appendix off flush with the cecum. The wound in the cecum is then at once sutured with continuous silk sutures applied with a round, straight or curved needle. The first row of sutures should include the serous, muscular and submucous coats of the cecum and the second row should be of the Lembert variety invaginating the first row into the cecum. This method of treating the stump of the appendix is, I think, a good one

5. Deaver, J. B.: *Appendicitis, Its History, Anatomy, Clinical Etiology, Pathology, Symptomatology, Diagnosis, Prognosis, Treatment, Technic of Operation, Complications and Sequelae*. 3rd ed. Philadelphia: P. Blakiston's Son and Co., 1905.

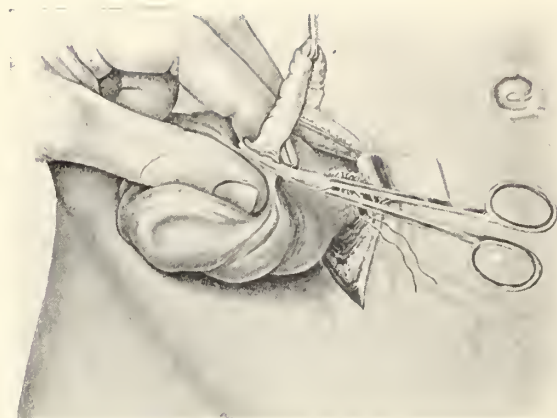


Fig. 4. Deaver technique of total excision.

A. The appendix is being severed at the appendicocolic junction. Spillage of fecal contents is prevented by gripping the cecum with the fingers. Presumably this did not prove to be practical and this technique was abandoned.



B. The wound in the cecum is being repaired with a continuous suture. The fingers are used to prevent spillage of fecal contents during this maneuver.

but it should not be employed by the occasional operator nor in the case where the cecum is not easily and without tension brought out through the abdominal wound. Unless the surgeon has a very secure and steady hold on the cecum, so that it is sure not to slip, it is far safer to ligate the appendix first or to invaginate it by Dawbarn's purse string suture as will be presently described. If any such accidental slipping of the cecum should occur, either from relaxation of the surgeon's hold or from an unexpected motion on the patient's part, the cecum might slip back within the wound and fecal extravasation into the free peritoneal cavity occur with fatal result."

In 1913 Deaver makes the following state-

ment in his book on appendicitis⁶ concerning handling of the appendiceal stump: "Complete excision of the base of the appendix and repair of the resulting hole in the cecum is unnecessary and more likely to cause contamination of the peritoneum and the abdominal wound." Deaver then described the technique of ligation with inversion as his recommended procedure at that time.

Presumably Deaver abandoned his method because of resultant possibilities of fecal contamination. Closed methods of total excision of the appendix have previously been reported by Lopez,⁷ Bancroft,¹ and Clark⁸ in which a clamp was placed across the cecum just proximal to the appendix. The appendix was then excised and the cecum closed with an inverting suture over the clamp. The technique the author proposes is a closed technique with little danger of fecal contamination. It is an aseptic non-traumatic amputation of the appendix and does not leave behind crushed tissue nor an appendiceal stump which would be susceptible to complications.

TECHNIQUE OF TOTAL APPENDECTOMY

The appendix is mobilized and the meso-appendix is severed and ligated. A clamp is then placed across the junction of the appendix and cecum. A continuous chromic 00 horizontal mattress catgut suture is then placed in the cecum just proximal to the appendicocolic junction. The appendix is then severed with a knife just above the suture line and beneath the clamp on the appendix, the ends of the suture being held taut. The direction of the cut is against the clamp to safeguard the possibility of cutting the suture. The ends are either (1) tied together if there is a comparatively narrow base or (2) sutures are tied at each end. A second layer of interrupted 3-0 black silk Lembert sutures is then placed over the initial layer, thereby accomplishing peritonealization (Fig. 5).

The author feels that with this method

6. Deaver, J. B.: *Appendicitis, Its History, Anatomy, Clinical Etiology, Pathology, Symptomatology, Diagnosis, Prognosis, Treatment, Technique of Operation, Complications and Sequelae*, 4th ed. Philadelphia: P. Blakiston's Son and Co., 1913.

7. Lopez, A. M.: Cited by Spivak, J. L. *The Surgical Technic of Abdominal Operations*, 4th ed. Springfield: Charles C. Thomas, 1946.

8. Clark, John. Cited by Bancroft.¹

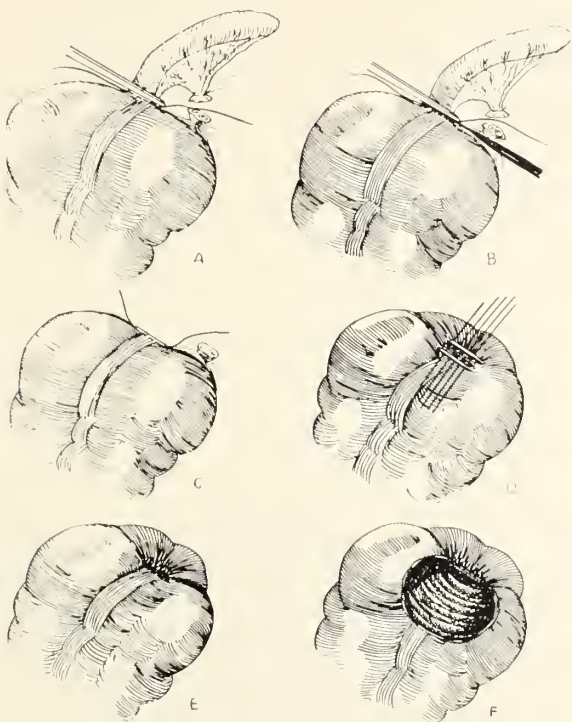


Figure 5. Total excision of the appendix.

A. A hemostat has been placed at the appendiceal junction and a continuous mattress suture has been placed in the cecum. The proximal end of the suture has been tied and the distal end is held taut until ready to tie.

B. A knife is used to excise the appendix by cutting between the suture line and the hemostat. The direction of the cut of the knife should be against the underside of the clamp to prevent cutting the suture line. The ends are held taut while the appendix is severed to prevent spillage.

C. The appendix has been severed. The ends are tied. If there is a narrow base, the distal and proximal ends are tied together; otherwise, the two ends are tied individually.

D. Lembert sutures, interrupted (usually three), are now placed over the first line of sutures, thus giving a two layered closure of the cecal wound.

E. The final external appearance of the suture line. There is no protruding stump subject to complications.

F. A sectional view showing the final internal appearance of the cecum. There is no stump subject to necrosis and abscess formation. The absence of the crushed stump should lead to rapid healing of the wound.

there will be a minimal tissue reaction in the presence of infection because there is no crushed tissue left behind nor is there an appendiceal stump remaining which is subject to necrosis and abscess formation. Therefore, when the appendix is removed atraumatically there should be rapid heal-

ing of the cecal wound. There would not be the delay in healing which one might expect when a stump of necrotic tissue is left behind which must be absorbed before healing takes place.

The author has used this method in fifty consecutive appendectomies, the initial case being in February 1955. Thirty-one appendices were removed for acute appendicitis, seventeen of which had varying degrees of involvement of the peritoneum. In addition, the pathologist classified three appendices as chronic and one subacute. There were fifteen normal appendices removed, fourteen of which were removed in conjunction with other surgery. There were complications in four cases; namely, pneumonitis, pyelitis and wound infections in two patients with ruptured appendices.

SUMMARY

1. Appendectomy, as generally performed today, is a subtotal procedure leaving behind a stump which, regardless of the three types of management, all present potential hazards due to the remaining stump. The author raises the question as to why leave a stump if the total appendix can be removed safely.

2. The three usual methods of handling the appendiceal stump are: (a) simple ligation, (b) ligation with inversion, and (c) inversion without ligation. Their advantages and disadvantages are listed.

3. Total excision of the appendix was first recommended by Deaver who used an open technique. He later abandoned this method due to the danger of fecal contamination.

4. The author describes his technique for total excision of the appendix, using a closed method to prevent possible fecal contamination. This method was used in fifty consecutive appendectomies. The author believes that total appendectomy removes the potential hazards of hemorrhage, abscess formation, fecal fistula and cecal diverticula which occur occasionally when a subtotal appendectomy is performed.

More babies are being born in hospitals and with a doctor in attendance than ever before, Health Information Foundation reports. In 1935 only 37 per cent were born in hospitals and 13 per cent of all births were unattended by doctors. In 1956 almost 95 per cent were hospital-born, and doctors attended 97 per cent of all births.

CAT-SCRATCH DISEASE

A CASE REPORT

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and

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Cat-scratch disease, a condition suggestive of but milder than tularemia, has been recognized for approximately twenty-three years. Although frequent reports of this condition have appeared in the foreign literature, the first case to be recorded in America was in 1951.¹ Since this time a number of investigators have recorded their experiences with this entity.²⁻⁵

The syndrome of cat-scratch disease is characterized by the occurrence of a cutaneous lesion near the site of contact with the animal and is accompanied by malaise, fever and regional lymphadenitis. Usually it is non-fatal, though occasional deaths from this disease have been reported.⁴ Cat-scratch disease is also known as cat-scratch fever, cat-scratch syndrome, and benign reticulosis, the latter term being introduced by Mollaret in 1950.⁶

As far as can be determined, the case to be presented is the first to be reported in the state of Alabama. This case illustrates a deviation from the usual syndrome seen in

cat-scratch disease. The possible occurrence of this condition after contact with the common cat should be kept in mind when the differential diagnosis of regional lymphadenopathy is considered.

CASE REPORT

G. A., a thirty six year old white male, was admitted to the Mobile Infirmary, Mobile, Alabama, on August 3, 1955 with a chief complaint of a mass in the left axilla of approximately one month's duration. Four months prior to admission, the patient was bitten several times on the left hand by an apparently healthy stray cat which he was attempting to remove from his attic. His wife was scratched and bitten at this time but developed no symptoms. The patient's cat bites healed quickly, with the exception of one small lesion on the index finger which disappeared in twelve weeks. Approximately six weeks prior to admission he noted the presence of a small, tender area in the left axilla which developed into a mass that gradually enlarged to the size of a goose egg. This was accompanied by an aching sensation which radiated down the left arm to the elbow, with malaise, slight fever, and diarrhea. Penicillin and hot compresses were prescribed by the family physician but no apparent response was present after ten days treatment.

The past history, family history and systems' review were noncontributory. Physical examination revealed a large 7x8 cm., hard, lobulated, slightly tender mass in the anterior aspect of the left axilla. This non-fluctuating mass was partially fixed to the chest wall and to the axillary structures. The physical examination was otherwise within normal limits. The urinalysis was not abnormal. The white blood count was 7,900 with 51 polymorphonuclear leukocytes, 38 lymphocytes, 5 monocytes, 2 eosinophiles, and 1 basophile. The red blood count was 4.7 million and the hemoglobin 14.5 gm. Febrile agglutinations including Brucella and proteous OX 19 were negative, with the exception of the typhoid and

From the Medical and Surgical Services of the Mobile Infirmary.

1. Greer, William E. R., and Keiffer, Chester S.: Cat-Scratch Fever. A Disease Entity. New England J. Med. 244: 545-548, 12 April 1951.

2. Daniels, Worth B., and McMurray, Frank G.: Cat-Scratch Disease: Nonbacterial Regional Lymphadenitis: A Report of Sixty Cases, Ann. Int. Med. 37: 697-711, October 1952.

3. Blatner, Russell J.: Cat-Scratch Fever, J. Pediat. 39: 123, July 1951.

4. Lang, H. L.: J. Pediat. 39: 431, October 1951.

5. Rivers, Thomas M.: Virile and Rickettsial Diseases in Man. J. P. Lippincott Company, Philadelphia, Pa., ed. 2, 1952, p. 673.

6. Mollaret, P.; Reilly, J.; Bastin, R., and Tournier, P.: Documentation nouvelle sur l'adenopathie regionale subaigue et spontaneement curable decrite en 1950. La lymphoreticulose benign d'inoculation. Press med. 58: 1353-1355.

7. Waters, William J.; Caulter, Semour S., and Prior, John T.: Cat-Scratch Syndrome. Pediatrics, 10: 311-318, September 1952.

8. Baker, J. A.: A Virus Causing Pneumonia in Cats and Producing Elementary Bodies, J. Exper. Med. 79: 159-172, 1944.

paratyphoid series, which were positive in low dilutions. The serologic test for syphilis was also negative.

At surgery multiple lymph nodes matted closely together and partially fixed to the axillary structures were found, several of which contained a gray-white purulent material. Cultures and stains of the lymph nodes and of the necrotic suppurate were negative for tubercle bacilli and mycotic organisms.

The pathologic report was as follows: "Lymph nodes showing caseation necrosis and a microscopic picture within the nodes consistent with a diagnosis of cat-scratch

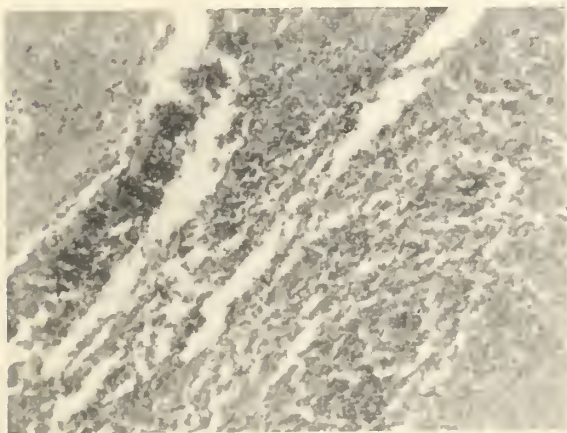


Fig. 1. Lymph node in cat scratch disease.



Fig. 2. Caseation necrosis seen in cat scratch disease.

fever" (Fig. 1 and 2). The postoperative course of the patient was uneventful and he was discharged on the fourth postoperative day. Following surgery, penicillin and streptomycin were administered but aureomycin was substituted when the pathologic diagnosis was received. Subsequent specific intradermal antigen tests for cat-scratch fever were positive. Five days following

discharge from the hospital the patient was completely asymptomatic.

DISCUSSION

The clinical syndrome of cat-scratch disease usually appears within fourteen days after contact with the infected animal. In the case presented there was a delay of three months prior to the onset of symptoms.

The most frequently seen form of the disease is manifested as a small indolent papule at the site of injury followed by regional adenopathy with single or multiple node enlargement. These nodes are usually three to five cm. in diameter and are freely movable. They are frequently firm, and erythema and heat are usually associated. Adherence of the nodes to surrounding structures is suggestive of suppuration.

Constitutional symptoms of a generalized infection appear in the majority of patients. Commonly seen are malaise, headache, generalized aching, weakness and anorexia. An evanescent maculopapular or erythematous rash is seen in approximately six per cent of cases.⁹ The temperature may range from normal to 105 degrees but is generally mild and persists from one to two weeks in most cases.

In the case presented no rash had been noted by the patient during his illness. The absence of a clinically recognizable form of the disease in the patient's wife who was also bitten and scratched was of interest, especially in the light of a subsequently negative cat-scratch antigen skin test.

The most frequently involved nodes in this disease are those in the axilla, which are usually tender and often suppurate. Fixation of nodes is variable and lymphangitis is probably never seen.

The common house cat is a carrier of many diseases, at least 36 being noted by Greer et al.¹ Other than cat-scratch fever, among the most common are tularemia, rabies, and brucellosis. According to Daniels et al.,^{2, 9} cat-scratch disease is frequently undiagnosed preoperatively and may be confused with any disease of the regional lymph nodes, including lymphomas, tuberculosis, Hodgkins, lymphogranuloma venereum, infectious mononucleosis, and infected cysts.

9. Daniels, Worth B., and McMurray, Frank G.: Cat-Scratch Disease. Report of 160 Cases, J. A. M. A. 154: 1247-1251, April 10, 1954.

In addition to clinical history, the diagnosis of cat-scratch disease is made on the basis of a specific intradermal skin test produced by injection of antigen prepared from pus obtained from suppurative lymph nodes.² The offending agent has never been isolated but it is believed by some investigators to belong to the psittacosis-lymphogranuloma venereum group of organisms.⁷ It is possible that the virus causing pneumonia in cats, as reported by Baker in 1944,⁶ may be the etiologic agent in cat-scratch disease.

The lymph nodes in our case were pathologically no different from those reported elsewhere.^{2, 7, 9} In the early stages of the disease, the presence of reticulo-endothelial hyperplasia is noted. Later there is cellular necrosis accompanied by polymorphonuclear infiltration and suppuration. Extensive necrosis, with caseation and invasion by macrophages, is then seen, followed by fibrosis and healing.

The treatment of this condition is not specific, although aureomycin and terramycin have been found to hasten recovery.^{1, 5} Spontaneous drainage may occur, but incision and drainage are often necessary for fluctuant nodes. Because of fixation to axillary structures and the presence of radiating pain down the left arm in the case presented, it is felt that excision of involved nodes is occasionally indicated therapeutically as well as diagnostically. Patients suffering from this condition usually have no residual following recovery, although exanthems resembling erythema have been reported.³

SUMMARY

1. An unusual case of cat-scratch disease is presented. It is believed that this is the first case to be reported in the state of Alabama.

2. Clinical and pathologic aspects of this condition are presented.

3. A greater index of suspicion of this disease and other diseases caused by the common cat should be manifest when the differential diagnosis of regional lymphadenopathy is considered.

American families spent about \$950 million in 1956 to pay the doctor, hospital and other maternity bills for the safer care of mothers and children in more than 4 million births, according to an estimate by Health Information Foundation. The average cost per family was \$225.

Cardiac Patients Can Now Safely Bear Children—Patients with congenital heart disease formerly died, but advances in heart surgery during the last 15 years have made it possible for them to live and even to bear children.

Five Detroit doctors have reported the successful delivery of a normal child by a woman who had undergone a "blue baby" operation in childhood. The doctors said they know of only three other such cases.

The report in the February Archives of Internal Medicine, published by the American Medical Association, was made by Drs. Jack M. Kaufman, Lucien A. Campeau, Paul E. Ruble, Joseph Monahan, and F. D. Dodrill.

The 20-year-old woman had undergone surgery for tetralogy of Fallot, a condition in which a defect in the artery between the heart and lungs prevents the blood from getting enough oxygen. The lack of oxygen causes a blueness of the skin. She underwent one operation at the age of nine and another at 14. She has since been well and has lived a normal life.

Her pregnancy was normal, except for repeated episodes of impending labor during the last seven weeks. This is a common experience for pregnant cardiac patients, the doctors said. The baby, who was normal and vigorous, was delivered four weeks prematurely. The mother made an uneventful recovery.

The doctors said that definite conclusions cannot be drawn from the study of only four cases, but they suggest that the outcome of pregnancy in surgically treated tetralogy of Fallot patients "may not be as unfavorable as previously thought and that normal pregnancy and delivery may be expected."

However, they warned that this optimism should not jeopardize the careful management of these cases. The patient should be watched closely for excessive weight gain and for signs of heart difficulties during the pregnancy, and special precautions should be taken during delivery.

Most Medical Students Subject to Military Service—Military service hangs like a sword over the lives of students enrolled in the country's 76 approved four-year medical schools.

A recent report by the American Medical Association disclosed that 81.5 per cent of all male students enrolled in medical schools during the 1955-56 academic year were subject to military liability. The number cited as liable for service makes no allowance for physical disabilities and other factors that would render an unknown percentage ineligible for service.

In the 1955-56 year, male students with military liability constituted 81 per cent of the first year class, 82 per cent of the second year, 82.5 of the third year, and 80 per cent of the fourth year group.

Small Children Can Understand Reasons for Hospitalization—Any child, even a four-year-old, can understand why he is in the hospital if the reasons are explained to him in simple language, three San Francisco researchers said recently.

They said in the February Archives of Diseases of Children, published by the American Medical Association, that a study of 100 children between the ages of three and 15 years showed that most of them were frightened and confused about why they were hospitalized, mainly because the reasons had not been adequately explained.

Only 25 children were able to give a good explanation and used medical terms which they understood. They seemed happier and more cooperative and showed that children are able to understand when explanations are given in simple terms, the authors said. For example:

A 10-year-old boy defined rheumatic fever as: "Your heart is tired and needs a rest."

A nine-year-old girl with hypothyroidism said she had a thyroid deficiency, which means: "I have no thyroid gland. A thyroid gland helps your food go all over your body, to grow, and if you don't take pills, you gain weight. I will have to take pills all my life."

An 11-year-old boy gave quite a lecture on nephritis, or as he said, "I have 'nethritis' in my kidneys, and I'm here for tests on me and to rest more."

He went on to explain, "It's not bad now, but if I walk around it will get worse and they can't stop it. . . I'm not a bit worried. I know they will make me better, and if I stay in bed, I can't get any worse. Since I've been here, they've taken blood tests. They had to do it 13 times to get blood nine times. It didn't feel good, but if it shows I'm getting better, I'll never miss it."

A four-year-old girl, seen before she had her tonsils and adenoids removed, said, "They're going to take my tonsils out." She explained that her tonsils are "in the back of my throat, and they're going to take out something else back of my nose. I have to stay one and a half to two days."

The authors observed, "It is evident from the comments of the older boy and girl how important is the . . . child's understanding of his illness in relation to his cooperation with procedures and in his follow-through on future care."

Twenty-six children who had had no preparation for their hospitalization showed considerable confusion about the reason why they were there. For example:

An 11-year-old said, "She (her mother) never told me. I guess 'cause I'm sick, so I can get better. Hard to remember. I don't think she did tell me though."

Twenty-two children had been given vague reasons. A three-year-old said, "To be fixed up." He was, however, unable to say what was to be fixed, the authors said.

A six-year-old answered, "To get me well," but he, too, was unable to elucidate further.

Twenty-seven children's only preparation had been overhearing symptoms or diagnoses, which further questioning revealed they did not understand.

A 10½-year-old boy said his spleen had been removed during an earlier hospitalization. He described his spleen as "a big, round thing that grows pipes; luckily mine didn't. A friend of mine's did, and they didn't get the pipes out and he died." He had no idea what the "pipes" were.

An even more confused explanation was given by a six-year-old boy in the hospital for fever of undetermined origin. He said he was there to find out why his head hurt, which he explained as:

"Mother thinks I got wool in my lungs from an old blanket. I passed some of it up through my nose. My x-rays show a black covering over my lungs, but I think it was from a fall."

The authors pointed out that children are quite observant of the examination and if the physician seems especially interested in some aspect, they are sure something is wrong. They said many areas of hospital routine can be modified to ease the child's fear. Painful procedures should be conducted in treatment rooms separated from the other children, and ward examinations should be done with an awareness that the child is "an understanding individual with feelings," they said.

The authors are Dr. Helen Gofman, Wilma Buckman, M. S. W., and Dr. George Schade of the Pediatric Mental Health Unit at the University of California Medical Center.

Human Tears Differ According to Cause—The composition of human tears differs according to the cause of the tears, a Los Angeles researcher said recently.

Robert Brunish, Ph. D., said that tears caused by emotional stress contain appreciably more albumin than do tears produced by an irritant such as onion vapors.

Brunish used an electrical apparatus to study tears obtained from persons ranging in age from six months to 50 years. Age had no effect on the composition of the tears.

The amount of tears secreted during emotional disturbances was much greater than that caused by onion vapors, air pollutants, or tear gas. The flow of irritant-induced tears usually began profusely and then stopped abruptly.

Brunish said tears caused by emotional disturbances and those produced without known cause are believed to resemble closely the fluid normally covering the surface of the eye. He called these two types "normal" tears.

At least three protein components have been identified in normal tears, Brunish said. These are albumin, lysozyme, and globulin. They are also in irritant-induced tears, but in different proportions.

More information about just how tears are formed might be gained, he said, by studying the proportions of proteins in tears produced by various causes. Such study might help explain what glands are involved in tear production and what role the nervous system plays.

Brunish, who is a member of the department of physiological chemistry at the University of California Medical Center, made his report in the American Medical Association's February Archives of Ophthalmology.



Editorials

THE RESPONSIBILITIES OF THE MEDICAL PROFESSION IN THE USE OF X-RAYS AND OTHER IONIZING RADIATION

Statement by the United Nations Scientific Committee on the Effects of Atomic Radiation

1. The United Nations General Assembly, being aware of the problems in public health that are created by the development of atomic energy, established a Scientific Committee on the Effects of Atomic Radiation. This Committee has considered that one of its most urgent tasks was to collect as much information as possible on the amount of radiation to which man is exposed today, and on the effects of this radiation. Since it has become evident that radiation due to diagnostic radiology and to radio-therapy constitutes a substantial proportion of the total radiation received by the human race, the Committee considers it desirable to draw attention to information that has been obtained on this subject.

2. Modern medicine has contributed to the control of many diseases and has substantially prolonged the span of human life. These results have depended in part on the use of radiation in the detection, diagnosis and treatment of disease. There are, however, few examples of scientific progress that are not attended by some disadvantages, however slight. It is desirable therefore to review objectively the possible present or future consequences of increased irradiation of populations which result from these medical applications of radiation.

3. It is now accepted that the irradiation of human beings, and particularly of their germinal tissues, has certain undesirable effects. While many of the somatic effects of radiation may be reversible, germinal irradiation normally has an irreversible and therefore cumulative effect. Any irradiation of the germinal tissues, however slight, thus involves genetic damage which may be small but is nevertheless real. For somatic effects there may however be thresh-

holds for any irreversible effects, although if so these thresholds may well be low.

4. The information so far available indicates that the human race is subjected to natural radiation,¹ as well as to artificial radiation due to its medical applications, to atomic industry and its effluents and to the radioactive fall-out from nuclear explosions. The Committee is aware of the potential hazards that such radiation involves, and it is collecting and examining information on these subjects.

5. The amount of radiation received by the population for medical purposes is now, in certain countries, the main source of artificial radiation and is probably about equal to that from all natural sources. Moreover, since it is given on medical advice, the medical profession exercises responsibility in its use.

6. The Committee appreciates fully the importance and value of the correct medical use of radiation, both in the diagnosis of a large number of conditions, in the treatment of many such diseases as cancer, in the early mass detection of conditions such as pulmonary tuberculosis, and in the extension of medical knowledge.

7. Moreover, it appreciates fully the contribution of the radiological profession, through the International Commission on Radiological Protection² in recommending

1. The radiation due to natural sources has been estimated to cause between 70 and 170 millirem of irradiation to the gonads per annum in most parts of certain countries in which it has been studied, although higher values are found locally in some areas. See the reports "The hazards to man of nuclear and allied radiations" published by the United Kingdom Medical Research Council in June 1956, in which also the millirem is defined; and from information submitted to the Committee.

2. See the report of the International Commission on Radiological Protection (published in the *British Journal of Radiology*—Supp. 6, of December 1954—in the *Journal français d'électroradiologie*—No. 10, of October 1955—etc. and revised in 1956).

maximum permissible levels of irradiation. As regards those whose occupation exposes them to radiation, the establishment of these levels depends on the view that there are doses which, according to present knowledge, do not cause any appreciable body injury in the irradiated individual; and also on the consideration that the number of people concerned is sufficiently small for the genetic repercussions upon the population as a whole to be slight. Whenever exposure of the whole population is involved, however, it is considered prudent to limit the dose of radiation received by germinal tissue from all artificial sources to an amount of the order of that received from the natural background radiation.

8. It appears most important therefore that medical irradiations of any form should be restricted to those which are of value and importance, either in investigation or in treatment, so that the irradiation of the population may be minimized without any impairment of the efficient medical use of radiation.

9. The Committee is consequently anxious to receive information through appropriate governmental channels as to the methods and the extent by which such economy in the medical use of radiation can be achieved, both by avoiding examinations which are not clearly indicated and by decreasing the exposure to radiation during examinations, particularly if the gonads, or the foetus during pregnancy, lie in the direct beam of radiation. It seeks, in particular, to obtain information as to the reduction in radiation of the population which might be achieved by improvements in instrument design, by fuller training of personnel, by local shielding of the gonads, by choosing appropriately between radiography and fluoroscopy, and by better administrative arrangements to avoid any necessary repetition of identical examinations.

10. The Committee also seeks the co-operation of the medical profession to make possible an estimate of the total radiation received by the germinal tissue of the population before and during the child-bearing age. It considers it to be essential that standardized methods of measurement, of types at present available, should be widely used to obtain this information and it emphasizes the value of adequate records, maintained by those using radiation medically, by the dental profession, and by the

responsible organizations in allowing such radiation exposure to be evaluated. The Committee is convinced that information of this type will make it possible to decrease the total medical irradiation of the population while preserving and increasing the true value of the medical uses of radiation.

HOSPITAL RATES

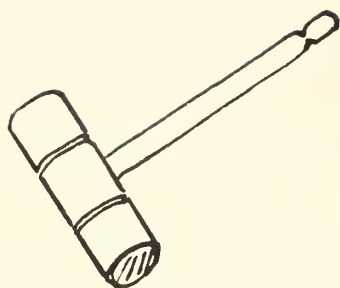
The American Hospital Association announced recently that room rates in United States general hospitals rose about 6 per cent in 1956.

In compiling its annual survey of hospital rates, the Association questioned short-term general hospitals in the United States and Canada. The results were based on 2,835 completed questionnaires. The tabulation did not include federal hospitals and large municipal hospitals because their rates are not comparable with those of most general hospitals.

Room rates cover the patient's bill for routine hospital services such as the hospital room, all meals on general and special diets, general nursing service, medical records, and routine housekeeping. In the computation of average rates, all rates were given equal weight regardless of the number of beds in the hospital, or the volume of service provided.

United States averages for the various types of rooms were: single rooms, \$15.19, two-bed rooms, \$12.16, and multibed rooms, \$10.58. A year ago the AHA reported averages of \$14.14, \$11.51, and \$9.84 respectively for these types of accommodation. This represented an increase in rates for single room accommodations of 7.4 per cent, two-bed rooms, 5.6 per cent, and multibed rooms, 5.8 per cent. The increases reflect the increase in hospital costs shown in other American Hospital Association statistics during recent years.

The Association's rate survey said, "For all types of room the highest averages by region were from the Pacific states, which showed averages of \$20.32, \$17.05 and \$15.78 for single, two-bed and multibed rooms, respectively." This region includes Washington, Oregon and California. The survey noted that the "lowest average rates were found in the West South Central region—\$11.53 for single room, \$8.96 for two-bed room, and \$7.49 for multibed rooms." In this region are Arkansas, Louisiana, Oklahoma and Texas.



President's Page

MENTAL HEALTH ORGANIZATION IN ALABAMA

Every physician appreciates the work being done by the various voluntary organizations for the prevention of disease and the promotion of health. The work of these groups is an important factor in the medical program of Alabama.

Among the more recently active organizations is the Alabama Association for Mental Health. The movement of this organization represents the interest and concern of citizens for adequate care and treatment of those who are mentally ill, and the desire to prevent such illness through education and by the service of regional or local mental hygiene clinics.

The State Association is projecting its program with the full understanding and approval of the Division of Mental Hygiene of the State Health Department. Also, Dr. J. S. Tarwater has expressed his commendation and approval of the work which the Association is doing to secure adequate financial support for our three state hospitals. This group led the successful fight to secure the approval of an amendment providing four million dollars for the improvement of existing buildings and the construction of additional facilities in the November elections.

The Alabama Association has organized twenty-five local county mental health associations. Its program calls for the organization of a local mental health association in all the sixty-seven counties of the state in the next twelve months. These local groups will constitute a tremendous resource which, if properly directed, will have an important part, not only in securing adequate financial support for our state

hospitals, but also in the promotion of good mental health and the development of mental hygiene facilities throughout the state.

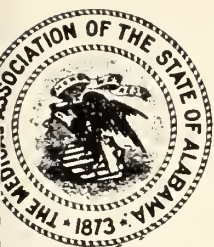
The State Association for Mental Health has requested me to ask each County Medical Society to appoint a committee of interested physicians to act as a consultant body for each local group in the development of its program. It is highly significant that this group of organized citizens wants to have the professional guidance and direction which the County Medical Societies alone can give. The State Association already has an advisory group made up of outstanding medical men.

In view of this request, I would like to ask that each County Medical Society appoint a committee of not less than three to act as a consultant and advisory body for each local mental health association. Where local mental health associations are not now formally organized, the encouragement and advice of this committee would be most helpful in effecting an organization. In County Medical Societies having members with psychiatric training, these should be included on the committee. However, it should be remembered that this program is of interest and concern to every physician, regardless of his special interest or training.

The Alabama Association for Mental Health and its local affiliates will furnish mental health literature when so requested by any physician.

As your President, I express the hope that each County Medical Society will act immediately on this request.

Grady O. Segrest



ORGANIZATION SECTION

PROGRAM OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA MOBILE APRIL 18, 19, 20, 1957 ADMIRAL SEMMES HOTEL

GENERAL INFORMATION

All sessions of the Association and exhibits will be at the Admiral Semmes Hotel, convention headquarters.

The maximum time consumed by essayists should not exceed twenty minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association.

All papers read before the Association should be deposited with the Secretary when read; otherwise, their publication may be delayed.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

REGISTRATION

The registration desk will be on the lobby floor of the hotel. Be sure to register.

THE FIFTY YEAR CLUB

According to custom, physicians who graduated fifty years ago will be honored by the Association at this meeting. Their names appear in the program.

HOST TO THE ASSOCIATION

The Mobile County Medical Society

OFFICERS

Arthur A. Wood, *President*
Joe H. Little, *President-Elect*
Carlton W. Winsor, *Secretary*
Howard S. J. Walker, Jr., *Treasurer*

BOARD OF CENSORS

Clarence V. Partridge, *Chairman*
Alexander J. Brown S. S. Murphy
William G. Fonde H. N. Webster

COMMITTEES

M. Vaun Adams, *General Chairman*
Carlton W. Winsor, *Co-Chairman*

Hotel

Chas. L. Rutherford, *Chairman*
John C. Hope, Jr., *Co-Chairman*
John W. Donald Gayle T. Johnson
Daniel F. Sullivan

Scientific Exhibits

Earl B. Wert, *Chairman*
William E. Purvis, III, *Co-Chairman*
C. Adrien Bodet, Jr. James G. Donald
Leon V. McVay, Jr. John Day Peake
Louis Raider

Commercial Exhibits

E. L. McCafferty, Jr., *Chairman*
Warren A. Yemm, *Co-Chairman*
Wm. J. Atkinson Wm. A. Blake
Dan W. Burke, Jr. Henry M. Dismukes
James H. Erwin

Transportation

Frank T. England, *Chairman*
Gordon E. Carroll, *Co-Chairman*
Edward A. Dudley Mattie Hyde
Harvey H. Mintz William E. North
Woodrow W. Polewoda Charles D. Terry
James A. Whiting Cornelia Wilcoxson

Motion Pictures, Lights, Microphones and Lantern Slides

Harry N. Webster, *Chairman*
Henry M. Gewin, *Co-Chairman*
Robert W. Cowden James F. Dumas
Charles M. Walsh, III

Publicity

Dixon Meyers, *Chairman*
Ernest G. DeBakey, *Co-Chairman*
Sam S. Murphy Howard S. J. Walker, Jr.

Hospital Visitation

Alexander J. Brown, *Chairman*
L. L. Brown, *Co-Chairman*
J. Mac Bell, Jr. Marion H. Dodson
Phillip P. Gilchrist Clarence V. Partridge

Entertainment

George W. Newburn, Jr. *Chairman*
Guy C. Oswalt, *Co-Chairman*
Claude L. Brown Samuel Eichold
William G. Fonde A. D. Henderson
Victor T. Hudson Jack Hyman
M. A. Lauter Joseph H. Little
Frank H. Maury Joseph R. Mighell, III
J. Richard Moore John E. Moss
William J. Neely William L. Sellers
Claude M. Warren, Jr. A. Hays Zieman

Reception

Joseph M. Weldon, *Chairman*
Norborne R. Clarke, Jr., *Co-Chairman*
Otis L. Chason W. Leslie Heiter
Richard P. Lester Leon V. McVay
Wm. D. McNally Selden H. Stephens

Finance

C. A. Lightcap, *Chairman*
J. C. O'Gwynn, *Co-Chairman*
Guy C. Oswalt

HONORARY CO-CHAIRMEN

(Past Presidents, Medical Society of
Mobile County)

J. Tunstall Inge	1915
Lee W. Roe	1918
G. G. Oswalt	1929
J. M. Weldon	1930
W. C. Hannon	1931
J. H. Dodson	1932
J. Mac Bell	1933
H. R. Cogburn	1934
L. W. Hollis	1936
Toxey D. Haas	1937
H. B. Dowling	1938
Grady O. Segrest	1939
Emmett B. Frazer	1941
Howard S. J. Walker	1942
Chas. L. Rutherford	1943
J. H. Baumhauer	1944
Cecil H. Ross	1945
John Day Peake	1946
F. Thos. Boudreau	1947
J. U. Reaves	1948
Norborne R. Clarke	1949
Mack J. Roberts	1950
Andrew D. Henderson	1951
David F. Sellers	1952
M. Vaun Adams	1954
Vivian H. Hill	1955

OFFICERS OF THE ASSOCIATION

President

Grady O. Segrest Mobile

President-Elect

John A. Martin Montgomery

Vice-Presidents

W. R. Carter Repton
Hugh E. Gray Anniston
S. W. Windham Dothan
W. D. Anderson Tuscaloosa

Secretary-Treasurer

Douglas L. Cannon Montgomery

Executive Secretary

W. A. Dozier, Jr. Montgomery

The State Board of Censors

E. V. Caldwell, Chm. Huntsville
J. G. Daves Cullman
Robert Parker Montgomery
C. E. Abbott Tuscaloosa
J. M. Weldon Mobile
John L. Branch Montgomery
J. O. Finney Gadsden
E. G. Givhan, Jr. Birmingham
John W. Simpson Birmingham
J. Paul Jones Camden

State Health Officer

D. G. Gill Montgomery

Delegates and Alternates to the American
Medical Association

Delegate—J. Paul Jones Camden
Alternate—D. G. Gill Montgomery
(Term: January 1, 1956-December 31, 1957)
Delegate—E. Bryce Robinson Fairfield
Alternate—B. W. McNease Fayette
(Term: January 1, 1957-December 31, 1958)

PROGRAM

First Day, Thursday, April 18

Ballroom A

Admiral Semmes Hotel

Morning Session

9:00 A. M.

Call to order by the President—
Grady O. Segrest, *Mobile*.
Invocation—
Dr. Howard M. Reaves, *Pastor, First Baptist Church, Mobile*.
Addresses of Welcome—
Hon. Henry R. Luscher, *Mayor-President, City of Mobile*.
Arthur A. Wood, *President, Mobile County Medical Society*.

PART I

REPORTS OF STANDING COMMITTEES

1. Medical Service and Public Relations—
J. Michaelson, *Chairman*.
2. Maternal and Child Health—
Hughes Kennedy, Jr., *Chairman*.
3. Cancer Control—
W. N. Jones, *Chairman*.
4. Postgraduate Study—
J. R. Garber, *Chairman*.
5. Mental Hygiene—
Jack Jarvis, *Chairman*.

6. Prevention of Blindness and Deafness—
Gayle T. Johnson, Chairman.
7. Tuberculosis—
Robert K. Oliver, Chairman.
8. Physician-Druggist Relationships—
A. J. Treherne, Chairman.
9. Anesthesiology—
Alfred Habeeb, Chairman.
10. Industrial Medicine—
C. L. Yelton, Chairman.
11. UMWA Medical Care Program—
E. Bryce Robinson, Chairman.
12. Blue Cross-Blue Shield—
J. G. Daves, Chairman.
13. Publishing Committee—
Douglas L. Cannon, Chairman.

SPECIAL COMMITTEES

1. On Insurance—
J. O. Morgan, Chairman.
2. On the Coroner System—
J. A. Cunningham, Chairman.
3. American Medical Education Foundation—
H. G. Hodo, Jr., Chairman.
4. Revision of the Constitution—
W. R. Carter, Chairman.
5. Indigent Care—
J. Paul Jones, Chairman.
6. Legislation—
Grady O. Segrest, Chairman.

REPORTS OF OFFICERS

Secretary-Treasurer—
Douglas L. Cannon, Montgomery.

Executive Secretary—
W. A. Dozier, Jr., Montgomery.

- Vice-Presidents—
- (1) Northwestern Division
W. D. Anderson, Tuscaloosa.
 - (2) Southwestern Division
W. R. Carter, Repton.
 - (3) Northeastern Division
Hugh Gray, Anniston.
 - (4) Southeastern Division
S. W. Windham, Dothan.

The President's Message—
Grady O. Segrest, Mobile.

PART II

SCIENTIFIC PROGRAM

1. *Functional Uterine Bleeding*—
HOWARD W. JONES, JR.,
Assistant Professor of Gynecology,
Johns Hopkins University,
Baltimore, Maryland.
2. *Differential Diagnosis of Tumors of the Neck*—
LEWIS C. SHARMAN,
Surgeon,
Tuscaloosa, Alabama.
3. *The Causes of Coronary Disease*—
RHETT P. WALKER,
Director of Medical Education,
County Hospital,
Mobile, Alabama.

4. *Infantile Cortical Hyperostosis*—
JOHN CAFFEY,
Professor of Clinical Pediatrics,
College of Physicians and Surgeons,
Columbia University,
New York, New York.



Afternoon Session

Thursday, April 18

2:00 P. M.

1. *Palpation of the Precordium*—
TINSLEY R. HARRISON,
Professor of Medicine,
Medical College of Alabama,
Birmingham, Alabama.
2. *The Best Treatment of Toxemia of Pregnancy*—
WALTER L. THOMAS,
Professor of Obstetrics and Gynecology,
Duke University,
Durham, North Carolina.
3. *Certain Problems in the Management of Pulmonary Disease*—
JOHN E. MOSS,
Internist,
Diagnostic and Medical Clinic,
Mobile, Alabama.
4. *The Psychiatrist, The General Practitioner and The Community*—
KENNETH E. APPEL,
Professor of Psychiatry,
Pennsylvania University,
Philadelphia, Pennsylvania.
5. *Accidental Poisoning in Children*—
JAY M. ARENA,
Associate Professor of Pediatrics,
Duke University,
Durham, North Carolina.



Second Day, Friday, April 19

Morning Session

Ballroom A

9:00 A. M.

1. *Medical and Surgical Treatment of Peptic Ulcer*—
KEITH S. GRIMSON,
Professor of Surgery,
Duke University,
Durham, North Carolina.
2. *Surgical Relief of Little Strokes Due to Thrombosis of the Internal Carotid Artery*—
CHAMP LYONS,
Professor of Surgery,
Medical College of Alabama,
Birmingham, Alabama.
and
J. GARBER GALBRAITH,
Professor of Surgery,
Medical College of Alabama,
Birmingham, Alabama.

3. *The Doctor as a Community Citizen—One Banker's View—*
J. FINLEY MC RAE,
President, Merchants National Bank,
Mobile, Alabama.
4. *THE JEROME COCHRAN LECTURE:
The Treatment of Arterial Hypertension—*
IRVINE H. PAGE,
Director of Research,
Cleveland Clinic Foundation,
President, American Heart Association,
Cleveland, Ohio.
5. Recognition of the Fifty Year Club.
6. Announcement of Vacancies in the College of Counsellors.
7. Meeting of Counsellors and Delegates for the Purpose of Making Nominations to Fill Vacancies in the College of Counsellors.



Afternoon Session

Friday, April 19

2:00 P. M.

1. *Medicine's Socio-Economic Policies—*
DAVID B. ALLMAN,
President-Elect,
American Medical Association,
Atlantic City, N. J.
2. *Toxic and Therapeutic Potentialities of Adrenal Steroids—*
DONALD W. SELDIN,
Professor of Medicine,
Southwestern Medical School,
Dallas, Texas.
3. *The Medical College of Alabama—A Progress Report—*
ROBERT C. BERSON,
Dean, Medical College of Alabama,
Birmingham, Alabama.
4. *Recent Advances in the Concept of Obesity—*
WILLIAM PARSON,
Professor of Medicine,
University of Virginia,
Charlottesville, Virginia.
5. *The Clinical Laboratory—An Assay—*
EARL B. WERT,
Pathologist,
Mobile, Alabama.
6. *The Surgical Treatment of Bronchiectasis—*
SIM PENTON,
Surgeon,
Montgomery, Alabama.



Last Day, Saturday, April 20

Ballroom A

9:00 A. M.

Business Meeting of the Association sitting as the Board of Health of the State of Alabama:

- (1) Report of the Board of Censors;
- (2) Revision of the Rolls:
(a) County Societies,
(b) Counsellors,
(c) Correspondents;
- (3) Election and Installation of Officers.

Adjournment

PROGRAM
OF THE
WOMAN'S AUXILIARY
TO THE
MEDICAL ASSOCIATION
OF THE
STATE OF ALABAMA

Battle House Hotel

April 18-19, 1957

OFFICERS

President

Mrs. John F. Holley..... Florala

President-Elect

Mrs. William Noble..... Ft. Payne

Vice-Presidents

1st—Mrs. Weldon Ray..... Bessemer
2nd—Mrs. Bruce Nelson..... Bay Minette
3rd—Mrs. James H. Farrior..... Montgomery
4th—Mrs. Fred Smith..... Huntsville

Recording Secretary

Mrs. John M. Kimmey..... Elba

Corresponding Secretary

Mrs. L. L. Parker..... Andalusia

Treasurer

Mrs. H. L. Rosen..... Montgomery

Auditor

Mrs. J. U. Reaves..... Mobile

Historian

Mrs. Harvey Searcy..... Tuscaloosa

Finance Officer

Mrs. S. Joseph Campbell..... Birmingham

Parliamentarian

Mrs. N. T. Davie..... Anniston

Directors

Mrs. William G. Thuss..... Birmingham
Mrs. John M. Chenault..... Decatur
Mrs. N. T. Davie..... Anniston

COMMITTEE CHAIRMEN

- A. *Sponsored by Woman's Auxiliary, American Medical Association*
American Medical Education Foundation—
Mrs. J. O. Brooks, Hamilton.
Bulletin—Mrs. Chester Beck, Hillcrest, Troy.
Civil Defense—Mrs. Reginald W. Baker, Dora.
Legislation—Mrs. James J. Durrett, 4121 Crescent Road, Birmingham.
Mental Health—Mrs. B. H. Johnson, 1817 Thirtieth Ave., N., Bessemer.
Nurse Recruitment—Mrs. J. C. Chambliss, 607 Third Ave., E., Cullman.
Organization—Mrs. Wm. Noble, 505 Gault Ave., SW., Ft. Payne.

- Program—Mrs. Marston T. Hunt, Boaz.
Public Relations—Mrs. Otis Jordan, 1606 Alaca Place, Tuscaloosa.
Today's Health—Mrs. W. A. Cunningham, 2511 Parklane Court S., Birmingham.
- B. *Sponsored by Woman's Auxiliary, Southern Medical Association*
Councilor to Southern—Mrs. John Chenault, 4 Cherokee Lane, Decatur.
Doctor's Day and Research and Romance of Medicine—Mrs. John Chenault, Decatur.
- C. *Sponsored by Woman's Auxiliary, Medical Association of the State of Alabama*
Archives and Exhibits—Mrs. Geo. Newburn, Jr., 242 Walshwood Ave., Mobile.
Lettie Daffin Perdue Scholarship—Mrs. B. B. Kimbrough, 1903 Dauphin St., Mobile.
Members-at-Large—Mrs. E. F. Leatherwood, Hayneville.
Memorial—Mrs. Clarence Partridge, 1119 Dauphin St., Mobile.
Newsletter—Mrs. B. F. Austin, 34 South Perry St., Montgomery.
Press and Publicity—Mrs. Mack Roberts, 61 Monterey South, Mobile.
Revisions—Mrs. Julian Howell, 2011 Church St., Selma.
Rural Health—Mrs. Chester P. St. Amant, Atmore.
Yearbook—Mrs. James M. Jones, Jr., 403 S. Woodland Drive, Dothan.
Nominating—Mrs. William G. Thuss, 2837 Southwood Road, Birmingham.
Essay Contest—Mrs. Lowell H. Clemmons, 200 Second Ave., E., Cullman.
Handbook—Mrs. John Chenault, 4 Cherokee Lane, Decatur.
- D. *For Convention*
Chairman—Mrs. Charles D. Terry.
Co-Chairman—Mrs. B. B. Kimbrough.
Credentials—Mrs. Phillip Gilchrist.
Registration & Reservation—Mrs. Frank England.
Social—Mrs. Claude Warren.
Flowers—Mrs. T. J. Bender, Jr.
Hospitality—Chairman, Mrs. Wm. B. Patton.
Co-Chairman, Mrs. Dixon Meyers.
Tickets—Chairman, Mrs. Claude Buerger.
Co-Chairman, Mrs. Howard Walker, Jr.
Archives & Exhibits—Chairman, Mrs. Geo. Newburn.
Co-Chairmen—Mrs. William Tucker, Mrs. E. D. Morton.
Press & Publicity—Mrs. A. D. Henderson.



Thursday, April 18

- 8:30-4:30—Registration.
9:00 A. M.—Preconvention Executive Board Meeting, Mrs. John F. Holley, President, Presiding, Battle House Hotel, Room C.
1:00 P. M.—Dutch Luncheon, Cawthon Hotel, Mrs. John F. Holley, Presiding.

Honoring Mrs. Robert Flanders, President, Woman's Auxiliary to the American Medical Association, and Mrs. John J. O'Connell, President, Woman's Auxiliary to the Southern Medical Association.

Invocation.

Welcome—Mrs. C. D. Terry, Mobile.

Response—Mrs. William Gary Cumbie, Andalusia.

Greetings from the Medical Association of the State of Alabama—Dr. G. O. Segrest, Mobile.
Greetings from Woman's Auxiliary to the Southern Medical Association, Mrs. W. O. Robinson.

Address—"Romance of the Development of the Polio Vaccine," Dr. Amos C. Gipson, Gadsden.

2:30 P. M.—First General Session, Battle House Hotel, Civic Room.

Call to Order—Mrs. John F. Holley, President, Florala.

Invocation.

Membership Pledge.

Welcome.

Introduction of Guests.

Convention Rules of Order—Mrs. C. D. Terry, Mobile.

First Report of Credentials Committee—Mrs. Phillip Gilchrist.

Report of Reading Committee—Mrs. John M. Kimmey, Elba.

Message—Dr. Douglas L. Cannon, Secretary-Treasurer, Medical Association of the State of Alabama.

Annual Reports of Officers.

Annual Reports of County Presidents:

Southeastern District—Mrs. James H. Farrior, Montgomery.

Coffee—Mrs. L. M. Johnson, Elba.

Covington—Mrs. Ferrin Young, Florala.

Elmore—Mrs. Ernest G. Moore, Tallahassee.

Geneva—Mrs. E. T. Brunson, Samson.

Houston—Mrs. W. T. Burkett, Dothan.

Montgomery—Mrs. Hinton W. Waters, Montgomery.

Pike—Mrs. Jesse H. Colley, Troy.

Russell—Mrs. W. B. Mims, Phenix City.

Northwestern District—Mrs. Weldon Ray, Bessemer.

Colbert—Mrs. Loren Gary, Tuscumbia.

Cullman—Mrs. J. T. Morris, Cullman.

Jefferson—Birmingham—Mrs. Arthur Freeman, Birmingham.

Jefferson—Bessemer—Mrs. Palmer Bell, Bessemer.

Lauderdale—Mrs. John Carter, Florence.

Marion—Mrs. Edwin W. Couch, Winfield.

Morgan—Mrs. C. D. Evans, Decatur.

Tuscaloosa—Mrs. Sidney Tarwater, Tuscaloosa.

Walker—Mrs. D. J. Williams, Jr., Jasper.

Memorial Service—Mrs. Clarence Partridge, Mobile.



Friday, April 19

8:30-12:30—Registration.

9:00 A. M.—Second General Session, Battle House Hotel, Civic Room.

Call to Order—Mrs. John F. Holley, President, Florala.

Invocation.

Introduction of Guests.

Second Report of Credentials Committee—Mrs. Phillip Gilchrist.

Minutes—Mrs. John M. Kimmey, Recording Secretary, Elba.

Message—Mr. M. L. Meadors, Executive Secretary, South Carolina Medical Association.

Annual Reports of County Presidents (continued):

Northeastern District—Mrs. Fred Smith, Huntsville.

Blount—Mrs. V. E. Whitehead.

Calhoun—Mrs. Phillip Fagan, Anniston.

DeKalb—Mrs. William Noble, Ft. Payne.

Etowah—Mrs. Charles Beckert, Gadsden.

Madison—Mrs. Bernie H. Moore, Huntsville.

Marshall—Mrs. Ellis F. Porch, Arab.

Talladega—Mrs. Lauris D. Graves, Talladega.

Southwestern District—Mrs. Bruce Nelson, Bay Minette.

Baldwin—Mrs. Norman Van Wezel, Foley.

Dallas—Mrs. George B. Nicholson, Selma.

Escambia—Mrs. E. O. Scharnitsky, Jr., Brewton.

Mobile—Mrs. C. D. Terry, Springhill.

Recommendations from the Executive Board.

Presentation of Budget for 1957-58—Mrs. S. Joseph Campbell, Finance Officer, Birmingham.

Recognition.

New Business.

Announcements.

Report of Nominating Committee—Mrs. W. G. Thuss, Chairman, Birmingham.

Election of Officers.

Election of Nominating Committee.

Election of Delegates to National Convention.

Final Report of Credentials Committee—Mrs. Phillip Gilchrist.

Installation of Officers—Mrs. Robert Flanders, President, Woman's Auxiliary to the American Medical Association, "Far Hills" Manchester, New Hampshire.

Presentation of President's Pin and Gavel.

Presentation of Past-President's Pin.

Introduction of Committee Chairmen for 1957-58—Mrs. William Noble, Ft. Payne.

Adjournment.

1:00 P. M.—Luncheon at Battle House Hotel.

Honoring Mrs. Robert Flanders, President, Woman's Auxiliary to the American Medical Association. Hosts, Mobile County Medical Auxiliary, Mrs. C. D. Terry, Presiding.

Invocation.

Achievement Awards.

Introduction of Guests and New Officers.

Address—Mrs. Robert Flanders.

Fashion Show.

Following immediately, Post Convention Executive Board Meeting, Battle House Hotel, Room C.

CONVENTION RULES OF ORDER

1. All persons appearing on program shall be seated in a reserved section at front of room.

2. Members of the voting body shall wear badges at all sessions of the convention.

3. When addressing the chair, the member shall rise, give her name, and the name of her county Auxiliary.

4. Unless notified to the contrary, each speaker shall be limited to two minutes and may not speak more than twice on any one question.

5. A timekeeper will notify each speaker when her two minutes are up.

6. All motions shall be written, signed, and presented to the Recording Secretary.

7. Reports shall be read only by the person making the report or her appointed delegate.

8. Visitors are welcome at all sessions of the convention, but are requested to register and to sit apart from the voting body.



OTHER ITEMS

THE FIFTY YEAR CLUB

Class of 1957

(To whom Certificates of Distinction will be awarded on Friday morning at the conclusion of the Jerome Cochran Lecture.)

A. Lanthus Blakeney	Fayette
David A. Bush	New Brockton
Edwin V. Caldwell	Huntsville
Turner C. Cameron	Faunsdale
Reuben A. Foshee	Alexander City, Route 3
Jesse A. Gibbs	Gainesville
Howard A. Griffith	Sheffield
Walter F. Hamilton	Birmingham
John M. Hankins	Birmingham
William S. Hansard	Ider
James S. Harmon	Elmore
Elbert F. Leatherwood	Hayneville
Belford S. Lester	Birmingham
George W. Newburn	Prichard
Edward O'Connell	Birmingham
John M. Roberts	Vernon
Wilbur M. Salter	Anniston
Eliga G. Sandlin	Holly Pond
Harvey B. Searcy	Tuscaloosa
James A. Sims	Renfroe, Rt. 1
John W. Snow, Jr.	Graysville
James P. Stallworth	Canoe
Keller B. Williams	Hartford



VACANCIES IN THE COLLEGE OF COUNSELLORS

The following vacancies in the College of Counsellors will present at this meeting of the Association:

1st Congressional District—4. W. J. Barber is deceased. The second terms of seven years of J. Mac Bell and J. Paul Jones expire. W. A. Stallworth is to be elevated to Life Counsellor.

2nd Congressional District—3. The second terms of seven years of J. O. Lisenby and Frank Riggs expire. L. V. Stabler is to be elevated to Life Counsellor.

3rd Congressional District—1. Frank Boyd has resigned.

4th Congressional District—1. C. W. C. Moore is to be elevated to Life Counsellor.

5th Congressional District—1. J. M. Crawford's first term of seven years has expired.

6th Congressional District—3. Charles T. Acker is deceased. R. C. Partlow's second term of seven years has expired. A. F. Wilkerson's first term of seven years has expired.

7th Congressional District—1. E. T. Brown is deceased.

8th Congressional District—2. J. O. Belue and C. A. Grote are to be elevated to Life Counsellors. H. A. Darby has resigned.

9th Congressional District—2. The second terms of seven years of Geo. A. Denison and Hughes Kennedy, Jr., have expired.

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OTHER EVENTS

The Alabama Association of Obstetricians and Gynecologists

Battle House, Mobile, Alabama

April 17, 1957

- 9:30 A. M. Howard W. Jones, M. D.
Baltimore, Maryland—Gynecological subject.
- 10:30 A. M. Walter L. Thomas, M. D.
Durham, North Carolina—Obstetrical subject.
- 11:30 A. M. Announcements.
- 12:00 M. Luncheon Round Tables.
Discussions of maternal deaths in Alabama for the year 1956. Any member of The Medical Association of The State of Alabama is invited to attend and participate in these forums.
- 1:30 P. M. Howard W. Jones, M. D.
Baltimore, Maryland—Obstetrical subject.
- 2:30 P. M. Walter L. Thomas, M. D.
Durham, North Carolina—Gynecological subject.
- 3:30 P. M. Consultation Hour.
A presentation of problem cases by Mobile physicians to Doctors Jones and Thomas, for their diagnosis and recommended treatment.
- 4:30 P. M. Business meeting and election of officers.
- 6:30 P. M. Social hour.
Courtesy of the Mobile County Obstetrical and Gynecological Society. Wives are invited.
- 7:30 P. M. Banquet.
Wives are invited.
- 8:30 P. M. Dr. Russell S. Poor, Provost,
The J. Hillis Miller Health Center, University of Florida, Gainesville.
Subject—The Florida Plan of Medical Education.

All members of The Medical Association of The State of Alabama are invited to attend.

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Alabama Society of Anesthesiologists

There will be a meeting of the Alabama Society of Anesthesiologists at 6:30 P. M. on April 17. Dr. Perry Volpito, Professor of Anesthesiology at the Medical College of Georgia, will be the guest speaker. He will speak on, "The Management of Anesthesia in Acute Emergencies in Children."

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Alabama Academy of General Practice

The Board of Directors of the Academy will meet at 6:45 P. M. on April 17 at the Cawthon Hotel.

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Alabama Chapter

American College of Chest Physicians

The Alabama Chapter of American College of Chest Physicians will meet on April 17. Time and place will appear in the program.

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Alabama Urological Society

A meeting of the Alabama Urological Society will be held on Wednesday, April 17. Time and place will appear in the program.

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Alabama Diabetes Association

A meeting of the Alabama Diabetes Association will be held at 2:00 P. M. on Wednesday, April 17 at the Admiral Semmes Hotel. Program participants will be Dr. Fred Williams, President, American Diabetes Association and Editor of A. D. A. *Forecast*, Dr. W. R. Kirtley, Director Medical Research, Eli Lilly Company, and Dr. Albert Easley, Director of Tennessee Diabetes Association Camp for Juvenile Diabetics.

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International College of Surgeons

There will be a luncheon meeting of the International College of Surgeons at 12:30 P. M. on April 18 at the Admiral Semmes Hotel. The annual business meeting will be conducted and officers will be elected.

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Buffet Supper and Dance

Members of the Association and their guests will be entertained at The Country Club of Mobile on Thursday, April 18.

Seafood Bar—6:00 P. M.

Buffet Supper—8:00 P. M.

Dancing 7:00 to 12:00 midnight.

The Mobile County Medical Society has not planned a social meeting for Friday, in deference to Holy Week.

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Vanderbilt Luncheon

The annual Vanderbilt Alumni Luncheon will be held at the Admiral Semmes Hotel on Friday, April 19, at 12:30 P. M.

**Alumni Association
Medical Department
University of Alabama**

The annual banquet of the Alumni Association, Medical Department, University of Alabama, will be held at 6:30 P. M. on Friday, April 19, at the Admiral Semmes Hotel. Dr. Robert C. Berson, Dean, Medical College of Alabama, will be the principal speaker. Medical Association members are invited to attend.



Gulf Coast Society of Psychiatry and Neurology

The Gulf Coast Society of Psychiatry and Neurology will meet at 6:30 P. M. on April 19 at Isle Dauphine Club on Dauphin Island. Dr. Kenneth Appel will be guest speaker.



Alabama Radiological Society

A luncheon meeting of the Alabama Radiological Society will be held at 12:30 P. M. on April 19, at the Battle House Hotel. Mr. Wm. C. Stronach, Executive Secretary, American College of Radiology, will speak on the subject "Trends in Economics of Radiology." A business session and election of officers will follow the luncheon.



Alabama Pediatric Society

A meeting of the Alabama Pediatric Society will be held in conjunction with the Annual Session of the MASA. Time and place will appear in the program.



TECHNICAL EXHIBITS

Concerns exhibiting at the meeting of The Medical Association of the State of Alabama, Mobile, Alabama, April 18-20, 1957.

1. Abbott Laboratories
North Chicago, Ill.
2. Ames Company, Inc.
Elkhart, Ind.
3. Ciba Pharmaceutical Products, Inc.
Summit, N. J.
4. Eaton Laboratories
Norwich, N. Y.
5. Hoffman-LaRoche, Inc.
Nutley, N. J.
6. Kremers-Urban Co.
Milwaukee 1, Wis.
7. Lederle Laboratories Division
American Cyanamid Co.
Pearl River, N. Y.
8. Eli Lilly and Co.
Indianapolis, Ind.
9. The S. E. Massengill Company
Bristol, Tenn.
10. The National Drug Company
Philadelphia, Pa.
11. Parke, Davis & Co.
Detroit, Mich.

12. Pfizer Laboratories
Brooklyn, N. Y.
13. Sandoz Pharmaceuticals
Hanover, N. J.
14. G. D. Searle
Chicago, Ill.
15. Merck Sharp & Dohme
Philadelphia, Pa.
16. U. S. Vitamin Corp.
New York, N. Y.
17. Winthrop Laboratories
New York, N. Y.
18. Mead Johnson & Co.
Evansville, Ind.
19. Wyeth Laboratories
Philadelphia, Pa.
20. Pet Milk Co.
St. Louis, Mo.
21. Carnation Co.
Los Angeles, Calif.
22. Van Antwerp Surgical Supply
Mobile, Ala.
23. Durr Surgical Supply
Montgomery, Ala.
24. General Electric Co. (X-Ray Dept.)
New Orleans, La.
25. Carroll Dunham Smith Pharmacal Co.
New Brunswick, N. J.
26. Tablerock Laboratories
Greenville, S. C.
27. Organon, Inc.
Orange, N. J.
28. General Surgical Supply
Birmingham, Ala.
29. Desitin Chemical Co.
Providence, R. I.
30. Doho Chemical Corp.
New York, N. Y.
31. Liberty Mutual Insurance Co.
Atlanta, Ga.
32. Endo Laboratories, Inc.
Richmond Hill, N. Y.
33. The Upjohn Co.
Kalamazoo, Mich.
34. A. H. Robins Co., Inc.
Richmond, Va.
35. A. S. Aloe Co.
New Orleans, La.
36. E. R. Squibb & Son
New York, N. Y.

For the convenience of the doctors to receive and place calls, a telephone will be in the booth of Pfizer Laboratories, Mr. Charles Lyle, representative, located on the convention floor. No charges to telephone, please.

SCIENTIFIC EXHIBITS

Anyone who desires space for a scientific exhibit for the Annual Session of the Medical Association of the State of Alabama, Mobile, April 18-20, is invited to write for information to Dr. Earl B. Wert, Route 4, Box 186, Mobile, Alabama.



ASSOCIATION FORUM

Dear Doctor:

The subject of social security for doctors has come up repeatedly of late and seems destined to occupy our thoughts and those of our federal law makers for some time to come. Through recent amendments to the Federal Social Security Act, dentists, lawyers, and members of five other professional groups have come under OASI (Old Age Survivors Insurance); physicians now stand alone in their refusal to participate. A group of doctors known as the Committee on Social Security for Doctors has given us the once over lightly treatment on the advantages to doctors of OASI coverage. Most of us have been polled at one time or other concerning our position on this immensely important matter.

Many of us when questioned have expressed an opinion based on a somewhat hazy knowledge of the issues involved. Generally speaking we are very positive in our conviction that government should play only a small role in the practice of medicine; and somehow acceptance of social security seems to imply a compromise of that conviction. Still the fact that doctors alone oppose participation in OASI seems reason enough to reflect upon the wisdom of this position.

It is for this reason that the Committee on Publicity and Public Relations (Legislative) of the Alabama Academy of General Practice has endeavored to seek out some of the advantages and disadvantages of social security for doctors and present them as concisely as possible to Academy members. Numerous articles and editorials have appeared from time to time in the JAMA on why compulsory social security coverage would be a bad thing for doctors. The most complete presentation of this view was published in the Sept. 15 and Sept. 22 (1956) issues entitled "Social In-Security—The Trap Awaiting the Young M. D."^{6, 7}

For materials favoring social security we

contacted the Committee on Social Security for Doctors, Senator Lister Hill, the American Dental Association, and the American Bar Association.

The most pertinent arguments for and against social security for doctors as we see it are presented herewith. These arguments do not necessarily reflect the thinking of the author of this letter. They have been lifted in part or whole from the writings or statements of people who are considered experts on the subject. Every effort has been made to present these arguments in an unbiased manner.

ARGUMENTS FAVORING COMPULSORY SOCIAL SECURITY FOR DOCTORS

1. *The Philosophy of Social Security*

A few words should be said about the philosophy of social security. On the heels of the depression in 1930 the "philosophy of federal concern for services and benefits traditionally discharged by states, communities, and individuals" began to develop. There was a "growing conviction among many that federal unconcern for its citizens' problems is synonymous with national irresponsibility." Pressing needs created by economic crisis (e. g., the depression) cannot always be solved personally regardless of the intention of the individual involved; there is a social and group character to the problem.¹

The "quest for security and protection in old age or after death in an era of high costs, high taxes, declining earnings later in life, and general economic uncertainty" is a legitimate one. Thus in "1935 the basic principle of using federal funds to advance the social security of all citizens won widespread popular support" and has apparently become more popular with passing time.¹

President Eisenhower in his social-security message in January 1954 said that OASI developed in response to a need "arising from the complexities of our modern society. The system is not intended as a sub-

stitute for private savings, insurance plans, and insurance protection. It is intended rather as a foundation upon which other forms of protection can be soundly built. Thus the individual's own work, his planning and his thrift will bring him a higher standard of living upon his retirement, or his family a higher standard of living in the event of his death, than would otherwise be the case. Hence the system both encourages thrift and helps to prevent destitution in our national life."

2. *Compulsory Coverage or Nothing*

Many doctors have expressed a desire for voluntary coverage under social security. This would seem to be "out of the question because it is not actuarially sound" and because Congress will not pass a bill giving this special privilege to self-employed doctors. Therefore doctors either accept compulsory coverage or get nothing at all. Furthermore it is unlikely "that doctors will obtain a tax-deferment retirement program, as provided in the Jenkins-Keogh Bill, until they are covered by compulsory social security."²

3. *Doctors Stand Alone in Opposition*

All other organizations of self-employed professional people have endorsed the principle of compulsory coverage.² Lawyers, who should certainly have a better understanding of the laws of the land than their medical colleagues, have accepted the program. Life insurance underwriters have not objected to OASI; they must therefore consider it preferable in some respects to private insurance.

4. *Private Insurance Companies Can't Offer Same Benefits*

Private insurance companies can't administer a similar program at less expense. A doctor must pay \$7,000.00 to \$25,000.00 more for retirement and life insurance than a dentist or lawyer.² The survivors of an individual covered by OASI stand to gain as much as \$38,000 (with a much more likely figure being \$34,000) in the event of his death.³

The pension for a dentist or lawyer approaching 65 and retirement may provide ridiculously high returns on investment. "Using an extreme example a man may obtain a pension for himself and his wife of \$162.80 for a payment of only \$189.00 in taxes over an eighteen months period before retirement." There are special advantages

to an individual who is entirely uninsurable or insurable only at high rates.⁴

Arguments to the effect that private insurance companies offer programs comparable in cost and benefits to OASI do not consider the combined package representing the very considerable survivor protection and appreciable retirement program.³

5. *Some Doctors Stand to Lose OASI Credits*

Many self-employed doctors have some OASI credits as a result of military service, teaching, previous salaried positions, etc. If these self-employed doctors are to continue to be excluded these credits will be lost.

6. *OASI Solvency May Require General Taxation*

The question arises as to "whether the whole social security system is actuarially unsound and hence may break down or not pay off in full. It seems fair to assume that if Social Security funds prove to be inadequate to pay the promised benefits the deficiency will be made up out of general revenue. Since we must make up this extra revenue in the form of general taxes, perhaps we should share in the benefits which we are helping to finance."⁴

7. *Average Retirement Age of Men 68½-69 Years*

The argument is made that only one out of seven doctors retires between the ages of 65 and 72. This carries the implication that all other persons in the social security system retire promptly at the age 65 so that doctors would pay for the retirement costs of others. On the contrary "the average retirement age for men has been between 68½ and 69 since the OASI system began."³

8. *Social Security Acceptance Won't Regiment the Profession*

Compulsory coverage does not mean regimentation of the profession. Self-employed business men, who have been covered by OASI since 1951, have not experienced more regimentation than doctors during this time.⁵

9. *Carrying Principle Too Far*

Social Security is obviously here to stay. It is foolish for doctors to miss this "grave train" ride merely for the sake of principle.

10. *Social Security for Doctors Doesn't Mean More Government in Medicine*

"The inclusion or exclusion of physicians under OASI while it is vitally important

to us as individuals cannot itself stimulate further government intrusion in the field of medicine."¹³

11. *Doctors Have a Social Obligation to Meet*

If social security coverage were extended to all groups "several benefits to the system itself would flow from the very fact of completeness." This would tend to reduce the proportionate costs of benefits. "Most important of all, complete coverage would in a matter of ten years or so reduce the need for public assistance to a bed rock minimum."¹⁷

12. *Physicians' Stand Important in Public Relations*

Physicians alone oppose Social Security coverage. Is this likely to be regarded by the public as a conscientious effort on the part of a militant group of freedom-loving Americans bent upon thwarting a paternalistic government from further socializing the nation; or is it likely to be regarded as an effort by a well-heeled profession more concerned with its own selfish interests than the interests of the nation as a whole? This could be important in our public relations.

ARGUMENTS OPPOSING SOCIAL SECURITY FOR DOCTORS

1. *OASI Represents Philosophy of Creeping Socialism*

Few would argue that the social security program arose from a real need in the early 1930's following the depression and has served and will continue to serve a useful function. There appears, however, to have occurred a change in political thinking since its inception. "What was originally set up as a plan to provide a minimum of protection for the poor is now being extended into all phases of our social and economic body."⁶

Again few would argue that the federal government has a vital role to play in solving the problems of its citizens. However too much substitution of individual responsibility by social or federal responsibility leads to a compromise of our independence and a deterioration of the moral fiber of the nation.

There is little or no difference in the philosophy of compulsory old age and survivors insurance and the philosophy of compulsory health insurance. Doctors can-

not divorce one from the other and accept the so-called bargain rates of social security for themselves and loudly deny the so-called bargain rates of socialized medicine to their neighbor's children who are in need of medical care. "The entire concept of social security has as one of its basic features the socialization of health services." This "has been proved by the course of social security legislation followed in the countries of Europe. As recently as 1947 there was legislation proposed in the Congress of the United States to effect a compulsory health insurance program in this country. This legislation was largely formulated by the Social Security Administration at that time."⁸ Disability benefits enacted by Congress earlier this year in H. R. 7225 bring the Social Security Administration closer to the regulation of medical care.¹³

2. *Organized Medicine Favors Jenkins-Keogh Bills*

Most physicians favor voluntary social security coverage but recognize the fact that such legislation is extremely unlikely. In preference to compulsory coverage organized medicine is giving its active support to the Jenkins-Keogh bills. "These bills would amend the Federal Internal Revenue Code so that self-employed physicians and others would have the same tax deferment advantages on the amounts set aside for retirement as are now enjoyed by the officers and employees of corporations and associations, and others."¹⁰ A recent poll of members of Congress indicates that this legislation has a good chance of passage this session.⁹

3. *Social Security Is Not Insurance*

The OASI program is not really an "insurance" program as it is called. This was ruled by the Supreme Court on May 24, 1937. This gimmick has been used to make the program saleable to the public. Could there be a "better way to sell a paternalistic or socialistic scheme of compulsory taxation to a traditionally independent people than to make its title and terminology synonymous in the peoples' minds with insurance, one of our oldest and most honored institutions?" Insurance provides contractual rights. The Social Security Act contains the following reservations of power: "The right to alter, amend, or repeal any provision of the act is hereby reserved to the Congress."⁷

4. *OASI the Financial Frankenstein of the Century*

The existence of the social security program, financially and politically unsound as it is, "constitutes one of the greatest hazards of the century." "By 1954, the social security accrued liability had reached the astounding figure of 280 billion dollars," equalling the debt that we have been able to build up in all other ways in the entire history of our country. There appears to be considerable doubt that this liability can be covered by existing social security tax laws.⁷

5. *Social Security Tax Dollar Poorly Protected*

There is talk of the protection of the "insurance trust fund." The social security booklet states that "the reserve portion of the trust fund—that is, the part not required for current disbursement—is invested in interest bearing U. S. Government Securities." This means that the reserve portion "is given by the government to the government in return for government bonds on which interest is to be paid into the 'trust fund'." This in turn means that the government must pay the government interest and principal in the future so that promised benefits can be paid. That part of the social security tax dollar, not immediately spent for benefits or administration, undoubtedly is used for other government expenses; this is not a way of putting money to work to earn more money. The principal way for this money to come back to the government is through general taxation.⁷

6. *Physicians Don't Want Federal Charity*

"Physicians as a group do not seek federal charity."¹⁰ Persons receiving OASI primary insurance benefits at the end of 1952 had already received on the average or were to receive \$24.00 for each 50c they had paid in taxes plus the 50c paid by their employers. The amendments of 1954 boosted the ratio to at least \$30.00 for each 50c. "Thus today 96 to 97% of the pension is a gift to the senior citizens from the taxpayers."¹¹ "The argument that we should accept those windfall benefits because almost every eligible citizen will have little appeal to physicians when their basic struggle is to preserve the free practice of medicine."¹⁰

7. *OASI Discriminates Against Higher Income Groups*

Although retirement and survivor pay-

ments increase according to the amount of taxes paid, the program is weighted in favor of the low income groups. Furthermore there is every indication that the tax base will be raised from the present \$4200 thereby creating an additional burden on the higher income groups. It has risen 40% in 5 years; a proposal now before Congress would raise it to \$4800. "Each physician might ask himself the following question: If I were a politician anxious to please the largest number of voters would I favor raising the social security tax base figure so that more benefits could be promised?"⁶

8. *Private Companies Offer Young Doctors Better Life Insurance*

Advocates of compulsory coverage for physicians contend that self-employed physicians with young children could well afford to pay the entire social security tax for the sole purpose of obtaining survivorship benefits. Actually equal or greater benefits can be purchased from life insurance companies at a lower cost. This can be done through decreasing term insurance (family income rider).^{6, 12}

9. *Only One in Seven Doctors Retires Before Age 75*

Most self-employed physicians do not retire. Currently about six physicians out of seven in the age group 65-75 are engaged in the active practice of medicine. Thus, the provisions of the OASI relative to retirement simply do not fit the economic pattern of the self-employed physician.

10. *Government Responsibility Synonymous with Individual Irresponsibility*

Those favoring social security contend that "the purposes are so worthwhile that we as doctors and humanitarians should back them. They say that social responsibility is part of civilization and that it should increase. Unfortunately in the history of civilization, social (or government in their minds) responsibility has always been synonymous with individual irresponsibility. As the latter grows, economies and civilizations decline and die, or are killed. Those who wish to be 'humanitarians' actually have the greatest stakes in keeping social security sound." "The self-employed physicians have nothing to be ashamed of in relation to their dollar contribution to humanity at large."

"When we see the 'humanitarians' always so ready to give generously of the time,

talent, training, energies, and incomes of others, making contributions of comparable value to society, then we will listen with more sympathetic, but not less critical ears to their Utopia—you to pay!—schemes and dreams.”⁷

11. *Compulsory Social Security Advocated by Physicians Forum.*

Most doctors have recently received literature advocating compulsory social security from a group known as the Committee on Social Security for Doctors of the Physicians Forum. “The source of this material should immediately cast doubt on the accuracy and objectivity of its message. Most physicians will recall that the Physicians Forum was the only medical organization in the country that supported national compulsory health insurance and will not look kindly on any cause that it supports.”¹³

Comment: Numerous arguments on both sides of lesser importance were omitted in an effort to keep the length of this letter within reason. A deliberate attempt was made to keep statistics and figures to a minimum.

For a detailed discussion of the subject slanted to paint a dismal picture of social security for doctors (and filled with figures as well as facts) references 6 and 7 are recommended. A rebuttal of these articles by a government actuary can be found in reference 3. For an objective statement of the financial benefits and restrictions of social security as compared with private insurance see reference 14. For any of you who would like to make a thorough study of the subject a complete bibliography is enclosed.

SUMMARY

The subject of social security for doctors is of vital importance to each of us and deserves all the attention we can give it. As AMA President Murray has said the issue is primarily one of personal philosophy, economics, and preferred alternatives.¹³ While writing this letter we have attempted to establish a definite policy regarding our own feeling on this issue but presently find ourselves in a state of indecision. From a practical standpoint the arguments for coming in under OASI appear most compelling. In principle and philosophy, however, social security becomes a sugar coated, so-

cialistic pill which goes down only with extreme difficulty.

Sincerely,

COMMITTEE ON PUBLICITY AND
PUBLIC RELATIONS (Legislative)

ALABAMA ACADEMY OF GENERAL PRACTICE

Richard O. Rutland, Jr., M. D., Chairman

J. T. Strickland, M. D.

W. J. B. Owings, M. D.

R. J. Guest, M. D.

J. G. Dunn, M. D.

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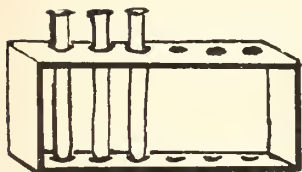
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STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

RHEUMATIC FEVER

Contributed by

Martha Terry, Director

Division of Public Health Education

When you call the doctor to report that your child has a sore throat, it will help him if you can answer the following questions which were drawn up by the American Heart Association: Did the sore throat come on suddenly? Does the child's throat hurt him when he swallows? Does it hurt when you press under the angle of the jaw? Are the glands there swollen? Does the child have fever? Does his head ache? Is he sick at his stomach? Is he vomiting? Has he been near anyone who has had scarlet fever or a sore throat?

The answers to these questions will give him the information he needs to help him decide if the child has a "strep" throat. In addition he may want to take a throat culture to be doubly sure.

Every sore throat should receive medical attention, but the "strep" throat has a special significance to the doctor. He knows that rheumatic fever is usually preceded by such a sore throat, or other "strep" infection. By prompt, adequate treatment, he can usually ward off an attack of rheumatic fever, the disease which has been called the greatest enemy of childhood.

Rheumatic fever is not now the threat that it once was. For unknown reasons incidence and mortality of rheumatic fever are declining. Increased knowledge makes it possible to prevent many cases. It is still

a serious disease, however, and one about which every parent should have some knowledge. It is still a leading cause of death from disease among school age children. It took 39 lives in Alabama in 1955 alone according to provisional statistics prepared by the State Department of Health.

It ranks high as a chronic, disabling disease. It is the commonest cause of heart disease among children. Some authorities believe it accounts for as many as 90 per cent of the cases of such heart disease. Too, many cases—some estimates are as high as 30 per cent—of heart disease in adults can be traced to attacks of rheumatic fever in childhood. The disease may strike adults, but its victims are most often children between the ages of six and twelve.

The exact cause of rheumatic fever is not known. As we have already said, it usually follows a "strep" throat, or other illness caused by the germ known as hemolytic streptococcus. Some of the other illnesses caused by this germ are tonsillitis, scarlet fever, and influenza. Every "strep" infection, however, does not lead to rheumatic fever. We do not know why some people develop the disease after such an infection while others escape it. A number of theories have been advanced to explain why this is so. One theory has it that heredity plays the determining role. Another is that climate determines the occurrence of the disease. This theory may be based on the fact that residents of the temperate zones, and this includes the United States, appear to be unusually susceptible to the disease. Furthermore, rheumatic fever seems to strike most often in cold rainy weather. Other theories point to malnutrition and

overcrowded living conditions as the cause. No one theory accounts for all of the cases of rheumatic fever. It seems likely that any or all of them may have a bearing on the development of the disease. Research has yet to find a definite answer.

You may be wondering what an attack of rheumatic fever is like. The disease attacks the connective tissues of the body, and causes inflammation of the muscle, valve, and outer lining of the heart. It may affect the joints, skin and other tissues, but it rarely causes significant permanent damage in these areas. It can and often does leave crippled hearts in its wake.

There is no single symptom or sign which is peculiar to rheumatic fever alone. In its early stages, the signs may be the same as those of several other childhood diseases. The symptoms appear about 2 or 3 weeks after a recognized "strep" infection. The most usual symptom is probably pain in the joints. The pain may move from one joint to another. Such pains, even when mild, should never be dismissed as "growing pains." There is no such thing. They are not necessarily a symptom of rheumatic fever, but they do have a cause and should be reported to the doctor.

Along with the joint pains, or in their absence, there may be fever, loss of weight, inability to gain weight, and nosebleeds. The child may be tired and listless, lacking in appetite. He may have a skin rash. There may be chorea, or St. Vitus dance, which means he can't control jerky movements of his legs, arms, and face. These symptoms may be acute, or they may be so mild as to pass unnoticed.

A child who shows any of these symptoms should be examined by his doctor. This examination is doubly important if the child has recently had a "strep" infection. These symptoms do not always mean the child has rheumatic fever, but only your doctor can decide.

The disease is not easy for him to diagnose. In addition to examining the child and reviewing his medical history, he may want to make blood tests, look at the heart with a fluoroscope, or examine it with the electrocardiograph, which traces the heart beat. There is not a specific test for the disease. If the tests and examination do not permit him to make a diagnosis, the doctor may want to make examinations at inter-

vals until he can be certain that the child does or does not have rheumatic fever.

And if it is rheumatic fever, what then? What can be done to cure it? Although there is not a drug which will cure the disease, your doctor can prescribe an effective course of treatment. It will probably include medicine to relieve the pain and nervous symptoms—make the patient more comfortable. To cure the disease itself, he will almost certainly recommend bed rest for an extended period. The bed rest may have to continue long after the child appears to be well and is eager to be up and about. And activity may be restricted after the child is permitted to be up.

Bed rest, followed by restricted activity, will help the damage to the heart to heal. During an attack of rheumatic fever, the heart is inflamed and may become enlarged. The heart may be scarred. Such scarring can cause one or more of the four valves of the heart to leak, or close, partly blocking the flow of blood. A prolonged period of rest gives the heart a chance to return to normal. Almost any exertion may strain the heart. The doctor will want to be sure that all signs of rheumatic fever have disappeared before the child gets up.

The child who has had an attack of rheumatic fever should be watched closely even though all signs of the disease have disappeared and he has resumed his normal way of life. For rheumatic fever is not a disease which you have once in a lifetime and can then forget. It has a tendency to come back and attack the same child again and again, and each attack increases the possibility of permanent heart damage. The doctor may prescribe drugs to prevent a recurrence of "strep" infections. He will want to be sure that diet and rest are adequate to insure good general health.

What can parents do if their children get rheumatic fever? Herbert Yahraes, author of the Public Affairs Pamphlet called "Rheumatic Fever, Childhood's Greatest Enemy," offers the following suggestions:

"First, see that he has competent medical care." As we have already indicated, diagnosis and treatment of rheumatic fever can be undertaken only by a physician. Medical supervision is necessary if your child is to have a chance to recover from the disease with an undamaged heart.

"Second, follow the doctor's advice, par-

ticularly about rest." We have already discussed the importance of rest in the cure of rheumatic fever. At present, it is the only available means of treating the disease. Disregard of the doctor's instructions will retard recovery and could prove fatal.

"Third, if you have any alarm, hide it." If your own fears for the child infect him, he may suffer from emotional crippling even though his physical recovery is complete. Be as natural as possible.

"Fourth, keep his mind busy. It takes ingenuity, patience, and often considerable effort to help a child amuse himself when he feels he ought to be up, but the result is worth it."

"Fifth, don't keep the child from activities the doctor allows him." Your own fears for the child may tempt you to make him more of an invalid than he really is. You can be sure that any activity the doctor says is permissible will not strain his heart. Let him proceed at the pace the doctor advises.

By following these suggestions, you may give your child a better-than-average chance for complete recovery without permanent impairment of his heart.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

December 1956

Examinations for diphtheria bacilli and Vincent's.....	118
Agglutination tests.....	500
Typhoid cultures (blood, feces and urine).....	512
Brucella cultures.....	2
Examinations for malaria.....	47
Examinations for intestinal parasites.....	2,208
Darkfield examinations.....	2
Serologic tests for syphilis (blood and spinal fluid).....	18,017
Examinations for gonococci.....	1,138
Examinations for tubercle bacilli.....	2,605
Examinations for Negri bodies.....	112
Water examinations.....	1,792
Milk and dairy products examinations.....	4,293
Miscellaneous examinations.....	255
Total	31,601

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR OCTOBER 1956, AND COM-

PARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During October 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births.....	7347	4620	2727	26.5	26.4	25.8
Deaths.....	2127	1340	787	7.7	7.9	7.7
Fetal deaths.....	160	64	96	21.3	21.6	22.0
Infant deaths— under one month.....	139	63	76	18.9	22.6	21.5
under one year.....	197	78	119	26.8	31.6	31.7
Causes of Death						
Tuberculosis, 001-019.....	20	9	11	7.2	11.3	11.4
Syphilis, 020-029.....	8	4	4	2.9	1.1	4.0
Dysentery, 045-048.....	1	1		0.4		0.7
Diphtheria, 055.....	2		2	0.7	1.1	0.4
Whooping cough, 056.....	1		1	0.4	0.7	0.4
Meningococcal infections, 057.....	3	2	1	1.1	0.4	1.8
Polio-myelitis, 080, 081.....	2	2		0.7	1.1	1.1
Malignant neoplasms, 140-205.....	299	222	77	107.8	96.7	98.1
Diabetes mellitus, 260.....	36	18	18	13.0	6.9	11.4
Pellagra, 281.....					1.4	1.5
Vascular lesions of central nervous sys- tem, 330-334.....	276	177	99	99.5	103.2	92.2
Rheumatic fever, 400- 402.....	6	2	4	2.2	0.4	2.9
Diseases of the heart, 410-443.....	692	453	239	249.5	254.7	256.9
Hypertension with heart disease, 440- 443.....	140	63	77	50.5	54.1	48.9
Diseases of the arteries, 450-456.....	36	24	12	13.0	19.3	12.9
Influenza, 480-483.....	9	5	4	3.2	2.5	1.8
Pneumonia, all forms, 490-493.....	56	30	26	20.2	19.3	20.2
Bronchitis, 500-502.....	4	2	2	1.4	2.5	1.1
Appendicitis, 550-553.....	4	3	1	1.4	1.1	0.7
Intestinal obstruction and hernia, 560, 561, 570.....	9	4	5	3.2	3.3	5.5
Gastro-enteritis and colitis, under 2, 571.0, 764.....	11	1	10	4.0	5.4	2.6
Cirrhosis of liver, 581.....	9	7	2	3.2	4.7	5.9
Diseases of pregnancy and childbirth, 640- 689.....	4	3	1	5.3	9.4	13.9
Congenital malforma- tions, 750-759.....	27	20	7	3.7	4.7	3.3
Accidents, total, 800- 962.....	165	112	53	59.5	68.0	49.2
Motor vehicle acci- dents, 810-835, 960.....	84	62	22	30.3	35.6	25.4
All other defined causes.....	371	209	162	133.8	137.0	142.2
Ill-defined and un- known causes, 780- 793, 795.....	76	30	46	27.4	37.1	29.8

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths —per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

April 1957

No. 10

EARLY DETECTION OF CARCINOMA OF THE CERVIX

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Cancer is one of the major problems in medicine. Early diagnosis is the cornerstone on which successful treatment depends. This fact should be uppermost in the mind of every practicing physician.

Women are more likely to develop cancer in the breast, genital or gastro-intestinal tract than anywhere else. These are areas that require frequent and careful examinations to find the earliest possible evidence of malignant growth.¹

Of malignancies occurring in the genital tract, the cervix is by far the most common site for cancer to develop. Malignancy of the cervix is unique in that it arises from a known tissue area around the squamocolumnar junction. Since a specific site is known where trouble may develop, it is possible to keep this area under close surveillance.

Cancer of the cervix is known to begin in the surface layers of the mucosa as the pre-invasive lesion, carcinoma-in-situ. This lesion may remain static for a long time but it usually develops into an invasive lesion in 5 to 7 years.

Since cancer does not develop suddenly in previously normal structures but has a long diagnosable quiescent period between local disease and invasive cancer, early diagnosis plays an important part in the handling of this disease.²

Presented at American Cancer Society Physician Seminar, Mississippi Division, Meridian, January 17, 1957.

1. Jones, W. N.: Gynecologic Cancer, J. M. A. Ala. 23: 4-6, July 1953.

2. L'Esperance, E. S.: The Early Diagnosis of Cancer, Bull. N. Y. Acad. Med. 23: 394-409, July 1947.

Cancer of the cervix develops at a relatively young age. Few doctors or their patients realize that the average age for patients with carcinoma-in-situ is 38.7 years of age and the average age for patients with invasive carcinoma of the cervix is 48 years of age. To emphasize the importance of age in the relationship to carcinoma of the cervix, one may be reminded that one third of patients with the disease are under 40 years of age.³

Mass surveys of well women in industry have revealed an incidence of 1 per cent carcinoma-in-situ, which would indicate the importance of routine pelvic examinations to pick up the earliest possible recognizable forms of carcinoma of the cervix.

If early detection of an existing pre-invasive or invasive lesion of the cervix is to be undertaken, several steps are necessary.

First, well patients must be trained to come for frequent periodic examinations. Patients under thirty may come in once a year but those over thirty, and especially those who are parous, should be examined every six months.

Second, patients must be trained to recognize certain symptoms that may suggest the presence of an abnormal disease process. Anyone manifesting symptoms of an unusual vaginal discharge, abnormal uterine bleeding or pelvic pain should not wait for the routine examination but should consult her physician immediately.

Third, the physician must assume the responsibility of attempting to diagnose early

3. Ayre, J. E.: Regression of Cervical Carcinoma-In-Situ, South. M. J. 45: 915-921, October 1942.

carcinoma lesions.⁴

To do this the physician must be trained to do the basic rudiments of a gynecologic examination and make full use of diagnostic aids that are available. He must take a careful history, which will include marital, menstrual and leukorrheal data. Any evidence of intermenstrual or postmenopausal spotting is significant and should be investigated.

The physical examination should include speculum visualization of the cervix and bimanual examination of the pelvis done with the bladder empty. A rectal examination should be included.

Mere visualization of the cervix is not accurate enough to determine whether or not a cancer is present. Additional diagnostic aids are frequently necessary. Those most commonly used are the Schiller iodine test, the Papanicolaou or vaginal cytology smear, or removal of cervical tissue by biopsy, conization or curettage.

The Schiller test, using Lugol's iodine, clearly shows the proper area to take a biopsy or remove cervical tissue for pathologic examination since both chronically infected as well as cancerous tissue fail to take the iodine stain.

The Papanicolaou or vaginal cytology smear has been of great value in helping to detect the very early genital malignancy. The cytology smear should be considered as a "diffuse biopsy" method as all the genital structures, to varying degrees, deposit their cells in the vaginal fluid. It is more efficacious in finding early cervical than fundal malignancy.

This excellent and useful method of early cancer detection is dependent on the availability of well trained technicians to do this type of work. At the present time only a few medical centers in the southeast are equipped well enough to handle these smears to the degree necessary for accurate diagnosis.

The most common method used for detection of cervical cancer is the removal of tissue by biopsy forceps for pathologic study. This method has proved its value for more than a hundred years and is generally available and reliable.

From my own experience and from the experience of others, the cytology study has not revealed any additional cervical cancers where there is no hesitancy on the part of the doctor in taking adequate biopsy specimens of all abnormal appearing cervixes.⁵

The question arises as to what may be considered an adequate tissue biopsy examination of an abnormal cervix. A single biopsy specimen, or even biopsy specimens taken from the four quadrants of the cervix, may miss a suspicious area or fail to show that invasion is taking place. Only complete removal of all diseased tissue about the squamo-columnar junction of the cervix will furnish the necessary specimens for proper pathologic study.

This may easily be accomplished in the office by using Gaylor biopsy forceps to cone out completely all the infected tissue of the cervix. The blood loss incurred is controlled by using Monsell's solution on the tip of a vaginal tampon.⁶

In 500 patients who were coned by this method in the past seven years because of some degree of cervical disease, 14 had carcinoma-in-situ and 6 had invasive carcinoma. These patients, prior to receiving the pathologic report, were classified as chronic cervicitis.

Where intermenstrual spotting occurs in spite of a normal appearing cervix, a curettage is indicated since adenocarcinoma of the cervix or a fundal malignancy may be present.

SUMMARY

Detection of cervical malignancy in the earliest possible stages gives the best prognosis for cure. This is accomplished by teaching the patient to come for routine examinations or to come immediately if any abnormal symptoms appear. The doctor must make every effort to detect malignancy in its earliest stages. The more common diagnostic methods available are the vaginal cytology smear and the cervical tissue biopsy. Removal of all diseased cervical tissue for careful pathologic study gives the most likely chance to find a carcinoma-in-situ or early invasive carcinoma lesion.

5. Jones, H. W., Jr.: The Detection of Pelvic Cancer, *J. A. M. A.* 146: 1197-1201, July 28, 1951.

6. Thomas, H. H.: Office Conization of the Cervix by Multiple Biopsy Technic, *Obst. and Gynec.* 6: 599-603, December 1955.

4. Thomas, W. L.: Uterine Bleeding Due to Malignant Neoplasms, *South. M. J.* 44: 19, January 1951.

THE ROLE OF SURGERY IN THE TREATMENT OF CARCINOMA OF THE CERVIX

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and

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HISTORICAL¹

Surgical treatment of carcinoma of the cervix is not a new concept. The earliest therapeutic approach to cancer anywhere in the body was surgical, and the technics have been modified through the ages. For years cancerous tumors were treated by application of caustic agents, as well as the actual cautery, before the boldest surgeons attempted excision. As early as 1560 A. D., Andreas A. Cruce of Granada performed a hysterectomy for carcinoma of the cervix with the cautery. Modifications of this approach continued to be reported in early medical literature, and the excised uterus was usually one that was well prolapsed. Before the era of antisepsis, surgical procedures were performed only in desperation, as they were attended by a high mortality rate. Consequently, surgical treatment was not enthusiastically accepted. The first surgeon who managed to perform successful operations for carcinoma of the cervix without a high mortality rate was Schauta in 1891. His mortality rate was 11.6 per cent in 724 cases. Others who followed him included Hoffmeier, Hirschman, Wisselinck and Wertheim, whose name is commonly applied to the surgical procedures for this disease that are in vogue today. The operation performed by Wertheim was probably devised by Ries in 1895 but to Wertheim must be attributed the credit for popularizing the procedure as we know it today. Bonney became the leading figure in the surgical treatment of carcinoma of the cervix during the early twentieth century.

The high initial mortality rate that still remained despite the reductions accomplished by these men led to a search for other means of treatment of cervical car-

cinoma. The discovery of the roentgen-ray in 1895 by Crookes and Roentgen, and its application to the treatment of malignant disease, made available an additional means for treatment of cervical carcinoma. The isolation of radium and radioactive metals a few years later furnished suitable means for the treatment of carcinoma of the cervix. Since the cervix is accessible for direct application of radium emanations, the emphasis was shifted from surgical to irradiation therapy for carcinoma of the cervix. Irradiation offered a means of treatment that was denied by the surgical approach at that time. The treatment itself was attended by a relatively low mortality rate and produced such local improvement in the lesion that this soon found favor in the eyes of physicians treating carcinoma of the cervix. The survival rate has continued to improve since the initiation of irradiation therapy for carcinoma of the cervix so that today in the best medical centers the absolute five-year survival rate is 40 per cent or more. Indeed, radiation therapy is accepted today as the foundation for treatment of all patients with carcinoma of the cervix.

CLASSIFICATION OF STAGES OF DISEASE

In any discussion of carcinoma of the cervix, a knowledge of the stages of the disease is important. Universal acceptance of a scheme of classification for carcinoma of the cervix followed the recommendations of the American Congress of Obstetrics and Gynecology in 1950. Such a classification was necessary because it was impossible to compare results of different methods of treatment without a common basis. Heyman,² with his two associates, Kottmeier and Segerdahl, attempted to eliminate the personal equation as far as the stage of carcinoma of the cervix was concerned. They independently examined and classified the stages of the cases of carcinoma of the cervix seen at the Radiumhemmet in Sweden and noted an error in classification of 11.2 per cent even between two experts in the field! Consequently, any system that tends to eliminate the variation in staging is im-

¹ Presented before the Alabama Chapter of the American College of Surgeons, Point Clear, Alabama, Jan. 18, 1957.

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portant in discussion of therapeutic results in this disease. The classification shown in

TABLE I	
INTERNATIONAL CLASSIFICATION OF CERVICAL CARCINOMA RECOMMENDED BY FOURTH AMERICAN CONGRESS OF OBSTETRICS AND GYNECOLOGY	
Stage	Definition
O	Carcinoma-in-situ, also known as pre-invasive carcinoma, intraepithelial carcinoma and similar conditions.
I	Carcinoma strictly confined to the cervix.
II	Carcinoma extends beyond the cervix but has not reached the pelvic wall; carcinoma involves the vagina, but not the lower third.
III	Carcinoma has reached the pelvic wall and lower third of the vagina (on rectal examination no "cancer free" space is found between the cervix and the pelvic wall).
IV	Carcinoma has extended beyond limits previously described to involve the bladder, rectum, or both.

Table I is generally accepted as the best means of classifying carcinoma of the cervix regardless of the histologic pathology of the carcinoma itself. This classification represents an attempt to define the limits of progression of the disease insofar as clinical examination is possible. One assumes therefore that, within the limits of a possible 10 per cent error, survival rates referring to the various stages correspond the world over.

RADIATION THERAPY

A wide variety of methods of administration of radium energy to carcinoma of the cervix has been employed and exploration of this field is continuing. Generally accepted throughout the world, however, is application of radium energy by means of intrauterine tandem, with or without vaginal colpostats, as the primary basis for radiation therapy by whatever means is feasible and by the various applicators that are available. Radiation is directed to the pelvis in such a way as to administer about 6700 gamma roentgen units of energy to a point 2 cm. lateral to the cervical canal and 2 cm. above the vaginal fornices. Radium has been utilized to obtain the same amount of irradiation to this point, whether given continuously or in divided doses at intervals of days or weeks. The difficulty attendant upon application of radium to the cervix is related chiefly to the effect of irradiation upon normal tissue, such as vesical

or intestinal mucosa. It has been estimated that 10,000 gamma roentgens are necessary to destroy cancer, but only half this amount will destroy vesical or intestinal mucosa.³ For this reason, it is important that the bladder and rectum be protected, insofar as is possible, from the direct effects of the irradiation. The results of irradiation in institutions throughout the United States and

TABLE II						
REPORTS OF FIVE YEAR SURVIVAL RATES FOLLOWING IRRADIATION TREATMENT OF CARCINOMA OF THE CERVIX ACCORDING TO STAGE OF THE DISEASE						
Author	Year	Stage				Absolute %
		I %	II %	III %	IV %	
Buschke et al. ⁴	1947	83	61.	-----	-----	-----
Kaplan et al. ⁵	1948	69	47.	4.	0	-----
Scheffey et al. ⁶	1952	55.0	55.8	1.4	0	47.6
Percival ⁷	1953	73.3	60.1	35.3	4.1	40.
Heyman ²	1955	71	50.3	24.7	9.1	40.5
Schmitz ⁸	1956	76.4	54.8	39.3	9	43.1

Sweden are given in Table II. It will be noted that the best survival rate of 83 per cent for stage I, reported by Buschke and associates,⁴ is considerably higher than any of the others for the same stage but their series was small. However, there is considerable similarity in the survival rates reported from the other centers of irradiation therapy. The absolute survival rate from these clinics has almost doubled that of two decades ago. Improvement in the methods of administering irradiation is probably partially responsible for this, but it is more likely that earlier recognition of cancer of the cervix before it has advanced to international stage III or IV has contributed more to improvement in survival than have changes in technic of administration of irradiation.

ROLE OF SURGICAL THERAPY

With the advent of irradiation therapy, surgical treatment of cancer of the cervix assumed a secondary role in management of this disease for several reasons. The foremost of these is the danger of infection that was so common in the early days of surgical procedures. Secondly, many patients were denied operative treatment because of complicating factors, such as heart disease, obesity or diabetes, and only the relatively young and vigorous could be expected to survive the surgical trauma asso-

ciated with this extensive surgical procedure in the early twentieth century. With World War II, however, great surgical advances followed the introduction of chemotherapeutic and antibiotic agents, blood replacement, and improvements in technics of anesthetization. The hazards of extensive surgical procedures were eliminated to a great degree and complicating infections no longer took their terrific toll. The need for haste in operating was eliminated, and preoperative improvement of the patient's condition permitted the surgeon to proceed cautiously so that more complete dissection of the diseased area could be accomplished.

Reevaluation of the surgical approach to the treatment of cervical cancer became more widespread following the reports of Meigs.^{9, 10} Dissatisfied with the survival rates following irradiation, Meigs believed that they could be improved by surgical removal of the diseased cervix, uterus, and vagina during the earlier stages of the disease. He emphasized the impossibility of recurrence if the cervix is removed. In his early experience Meigs favored operating upon stage I carcinoma of the cervix initially, and stage I or II carcinomas that failed to improve following irradiation. This, of course, limited considerably the number of surgical candidates. The success reported by Meigs in the primary surgical treatment of the early stages of cervical carcinoma and the increased tolerance of patients to more extensive surgical procedures with modern methods of anesthetization led to performance of ultraradical excision for apparently hopeless cases of carcinoma of the cervix by Brunschwig and Pierce¹¹ and others.^{12, 13} Brunschwig presumed that the patient with stage IV carcinoma of the cervix had little chance of surviving five years, and this is evident from the best results reported from the major radiologic centers. Consequently, any salvage of patients in this group would be an advance. In addition these patients might be made considerably more comfortable during their remaining years. Brunschwig demonstrated that a survival rate for five or more years can be secured in a respectable percentage of cases when one considers the low salvage rate that follows surgical treatment of other neoplasms of the abdominal cavity, such as the stomach, liver and pancreas.

Management of urinary diversion, however, still remains a problem that is difficult to control, and prevention of late post-

operative urinary obstruction remains the chief problem to be solved. Total pelvic exenteration (removal of the uterus, vagina, bladder and rectum) is attended by an operative mortality rate of approximately 10 per cent. Partial exenteration is somewhat better tolerated by patients, particularly if the bladder is not removed. Modifications in the operative management of the urinary tract have been suggested by Parson and associates^{12, 13} and Bricker¹⁴ to eliminate the difficulties associated with wet colostomy. Unfortunately, no method is entirely satisfactory, although the ileal pouch seems to offer the most hope. Exenteration procedures were initially used only in patients with recurrent carcinoma that had previously been irradiated to tolerance. Occasionally the ultraradical operation was performed if cure or palliation seemed unlikely with irradiation. Combination of irradiation and surgical measures, however, is not new. In 1947 Schlink and associates¹⁵ reported treatment of cervical carcinoma by intravaginal and intracervical applications of radium followed in five weeks by radical hysterectomy of the Wertheim type. Approximately 49 per cent of the cases were considered operable. In 1950 Schlink¹⁶ reported that 54 per cent of patients with stages I, II, or III had lived five years or more. In 1946 Ferris¹⁷ reported use of irradiation followed by radical operation in selected cases at the Mayo Clinic. Pratt¹⁸ recently stated that irradiation followed by operation is more often employed in this disease than operation alone. Bouwdijk Bastiaanse¹⁹ utilized radium, followed by either the abdominal or vaginal radical operation, and, more recently, Crawford and associates²⁰ reported their experiences with surgical measures as an adjunct to irradiation in carcinoma of the cervix.

The chief arguments for surgical removal of the uterus, cervix, upper vagina and parametrium include the facts that not all carcinomas of the cervix are radiosensitive, and that, in these, recurrence is the rule within a relatively short period of time. Secondly, the cervix, if removed, cannot be a focus for regrowth of another cancer. Thirdly, it is impossible to ascertain, prior to histologic study, whether or not lymph nodes are involved at the time of operation. With improvement in radiologic methods the survival rate of patients with radiosensitive carcinoma of the cervix has been

improved to a remarkable degree. It is, however, virtually impossible to predict which patients have radiosensitive lesions prior to therapy. Vaginal smears before and during the period of radiation have been studied by the Grahams²¹ who believe that they can predict which tumors will respond to radiation. Unfortunately, others have not been able to support this contention nor is it a practical means of differentiating the radiosensitive from the radioresistant cases. Cherry and associates²² attempted another means of making this differentiation. They performed biopsy of the cervix during the period of irradiation and obtained cell counts on this tissue. In those patients thought to have radiosensitive lesions, pelvic node dissection and simple hysterectomy are performed but in those thought to have radioresistant tumors radical hysterectomy and pelvic node dissection are carried out. It is fair to say that at the present time there is no means of accurately determining the radiosensitivity of a cervical carcinomatous tumor.

The problem of lymph node metastasis at the time of initiation of therapy is of major importance, and closely associated with this problem is the question as to whether irradiation therapy of the pelvic lymph-bearing tissue can actually cause a tumoricidal effect. The incidence of positive lymph nodes varies in stage I from 17 to 25 per cent, according to various authors, and in stage II from 30 to 35 per cent.¹⁹ Not all radiologists believe that positive lymph nodes can be rendered free of tumor by adequate irradiation^{1, 7} and Percival⁷ stated that 25 per cent of patients with stage I are not cured by irradiation; these are called radioresistant cases. Pratt¹⁸ found that, after planned irradiation, approximately the same percentage of patients with stages I and II have positive nodes with identifiable tumor as do those who receive no irradiation. Surgically minded physicians consider this an argument for pelvic lymph node resection.

GENERAL PROGRAM OF THERAPY

In the management of carcinoma of the cervix, as in carcinoma in other localities, the only satisfactory time to treat the patient is immediately after the lesion has been recognized. Incomplete treatment and retreatment after a delay generally are unsuccessful. Consequently, it behooves the physician to employ every available effec-

tive means of therapy for carcinoma wherever it may be. Of utmost importance is the early diagnosis of carcinoma of the cervix, since the recovery and salvage rates fall sharply as the disease progresses. Much of the improvement noted in the treatment of carcinoma of the cervix has resulted from earlier recognition of the disease. With cancer education, screening smear program, and increased awareness of this disease by physicians, relatively early diagnosis of cancer of the cervix is not only possible but foreseeable.

Stage 0—Pre-invasive carcinoma of the cervix, or carcinoma-in-situ, should be a diagnosis of exclusion; that is it can be made only after invasive carcinoma of the cervix has been excluded. If pre-invasive carcinoma is diagnosed by biopsy, a surgical cone specimen of the cervix is mandatory. Invasive areas in the cone automatically place the disease in stage I. Should no invasion be found, surgical removal of the uterus is the treatment of choice. In young women oophorectomy need not be performed and pelvic lymphadenectomy is unnecessary. Selection of the abdominal or vaginal approach should be predicated on the condition of the patient. We have had no recurrence in these cases.

Stages I and II—It has been our policy to employ a single application of radium intravaginally and by intracervical tandem so that 6700 gamma roentgens are administered to a point 2 cm. lateral to the cervix and 2 cm. above the lateral vaginal fornices in patients with early stage I. In patients with stage II, external irradiation under the supervision of the radiologist is added. If the tumor is extensively infected, external irradiation may be employed prior to application of radium. Preliminary external irradiation lessens necrosis and infection in the tumor and reduces the incidence of complications sometimes associated with the application of radium. Six weeks after irradiation the patient's condition is reevaluated for consideration of surgical therapy. If the tumor has regressed and the mobility of the pelvic structures is satisfactory, the patient is admitted to the hospital for surgical treatment, which consists of 1) abdominal exploration and 2) pelvic lymphadenectomy and *en bloc* removal of the uterus, parametrium and upper vagina. Should the initial exploration of the abdomen reveal palpable lymph

nodes above the pelvic brim in the para-aortic area, biopsy of these nodes is performed and the abdomen is usually closed. We believe that such cases are inoperable.

Stage III—Patients who have clinical stage III carcinoma of the cervix are treated initially with radium and deep roentgen-ray therapy, after which their condition is reevaluated. It has been surprising to us that some of these lesions apparently were not as far advanced as we originally considered them to be and surgical removal proved to be feasible.

Stage IV—Patients with stage IV carcinoma of the cervix are treated first by external irradiation, followed by intravaginal and intracervical radium application. Continued observation of these patients is mandatory, since the possibility of partial or total pelvic exenteration must be considered. It is our belief that these unfortunate patients with stage IV carcinoma of the cervix have a better chance of cure if surgical treatment is not delayed too long, and if the disease is not showing obvious signs of regression.

RESULTS

Of 90 private patients with carcinoma of the cervix treated surgically by us there have been no deaths in the hospital. Sev-

enty-two of these had surgical removal of the uterus and pelvic node dissection for clinical stages I to III (Table III). A detailed analysis of these cases will be presented elsewhere. The remainder had pelvic exenteration with a survival rate of 9 months to 7 years in 20 per cent of cases. These statistics would seem to favor encouragement of continued use of surgical treatment of carcinoma of the cervix whenever feasible.

COMPLICATIONS

One should not assume that such an extensive surgical procedure is without hazard. Although we have had no hospital deaths, we must be aware of the possibility of the postoperative development of such complications as bladder atony, cystitis, pyelonephritis, hydronephrosis, obstructing ureteritis and urinary fistula. Occasionally, lymphocele or pelvic abscess occurs, and thrombophlebitis is an unwelcome complication to dissection of the great vessels within the pelvis. The incidence of urinary fistula (about 5 per cent) is high, but fortunately some of these resolve spontaneously. We do not believe that the complications of operation following irradiation are sufficient to contraindicate the procedure.

SELECTION OF PATIENTS

Since initiation of our program of combined surgical and irradiation therapy, we have not selected cases in any specific manner. We have not excluded obese patients, although obesity renders the operation somewhat more difficult. Nor have we excluded patients with cardiac disease, provided the cardiac disease was stabilized at the time. In fact, one of our patients died of a heart attack nine months after operation. Another died of coronary occlusion more than five years after partial pelvic exenteration. Diabetes is not considered a contraindication. The chief deterrent to surgical treatment is the decision of the patient to rely upon the cornerstone of treatment, namely, irradiation. In the younger women in our series with invasive carcinoma we have urged surgical treatment, particularly following irradiation. Whereas we also advise it in older patients, we are not as likely to urge them to submit to both irradiation and operation. We do not urge patients to have exenteration procedures but allow them to make up their own minds after a thoroughly frank discussion, not only of the problem as it

TABLE III
SURVIVAL RATES OF 90 PATIENTS WITH CERVICAL CARCINOMA ACCORDING TO TYPE OF TREATMENT

Surgical Procedure	Number Alive	Dead	Total
Radical hysterectomy & gland dissection	(75%) 59 (5 yr.)	13	72
Vaginal removal of stump & pelvic gland dissection	0	2	2
Radical hysterectomy, gland dissection, vagi- nectomy & abdominal perineal of rectum	1	3**	4
Radical hysterectomy, gland dissection, vagi- nectomy & cystectomy			
a. skin ureterostomies	1	0	1
b. ureterosigmoidos- tomy	2	3+	5
Pelvic exenteration			
a. skin ureterostomy	1*	0	1
b. wet colostomy	1	4±	5
Total			90

* recurrence after 7 years
** LT follow-up after 4 years (one died coro-
nary disease after 5 years)
+ Longest survival 15 mo.
± Longest survival 30 mo.

exists at the time of the consultation but also of the problem that they will face should the operation be successfully concluded, and the prospect of complete cure is outlined to them. We have not yet encountered a patient who has regretted having submitted to complete or partial pelvic exenteration.

CONCLUSION

The role of surgical treatment in the management of carcinoma of the cervix has undergone a renaissance following World War II, chiefly through the influence of Meigs. Improvement in the methods of anesthetization, blood replacement and surgical technic, as well as the advent of antibiotic therapy, has sufficiently reduced the operative mortality rate to justify surgical treatment. Although results of irradiation therapy have continued to improve, there still remains a group of patients whose disease cannot be cured by this means. Efforts to determine radiation sensitivity of the tumor prior to and during irradiation therapy have not met with universal success. Surgical therapy in patients who have previously had irradiation can be accomplished without undue hazards and probably increases the salvage rate. More widespread performance of surgical procedures after irradiation is apparent in the world literature. In unfortunate patients with apparently hopeless stage IV carcinoma of the cervix partial or total pelvic exenteration offers a better chance for prolongation of a useful life than does radiation alone.

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THE EFFICACY OF CERVICAL DISC SURGERY

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It is pertinent in any modern discussion of disc surgery to view with some apprehension recent articles in the lay press which have, in addition to the usual castigation of the medical profession, outlined the medical or bloodless treatment for back pain. There is even one recent one wherein the injection of a vegetable oil somewhere, vaguely defined, about the spine relieves all back and even radicular pain.

It is probably unnecessary to point out that a large protruded, or extruded, nucleus pulposus partially filling the spinal canal and compressing the offended nerve root so that it has swollen twice its normal size can hardly be relieved by the injection of any material, or ingestion of any pill, or by any magic manipulation.

It is, of course, true that certain disc-like syndromes tend to relieve themselves with the passage of time. In our experience these patients do not harbor true protruded discs but usually have some ligamentous or arthritic process which may be reversible in itself. It is also conceivable that small protrusions might replace themselves into the intervertebral space, or that they might even become dehydrated and become a flattened area with minor protrusion, thus giving relief of the major pain. It is, however, absurd to think that any large mass can be relieved in this fashion.

The role of the cervical disc in producing neck, shoulder, and arm pain has become increasingly recognized during the past two decades. The syndrome has passed through its era of discovery and delineation, and at the present time is fully accepted as a partner to the protruded lumbar disc. As you know, Dr. Dandy in the early 1920's saw a few of these protrusions and removed them, calling them chondromas. In the late '30's they began to be recognized as an actual disc protrusion and by 1941 they were being actually diagnosed and operated upon as a specific entity.

Dr. Spurling in 1942, and Drs. Semmes and Murphey in 1945, with others, outlined

the clinical picture and many patients with formerly intractable, severe neck, shoulder and arm pain were able to find relief through surgery.

The most common areas involved are between C5 and 6 and C6 and 7. This is due, of course, to the increased mobility of the cervical spine at these points. These syndromes are markedly alike in that the radial nerve is equally involved. The roots involved, however, do give different areas of hypoalgesia of the skin, thus a lesion of the 6th cervical nerve root between C5 and 6 causes hypoalgesia at the base of the thumb and a disc between C6 and 7, hypoalgesia of the distal portion of the index finger. The reflexes may or may not be reduced. In a large disc between C5 and 6 the biceps reflex may be reduced and between C6 and 7 the triceps may be diminished. Pressure on the head reproduces the pain and the radial nerve itself is exquisitely tender to pressure.

X-ray examination may show a diminution of disc space, or an osteophyte at the foramen, but when this is the case the diagnosis is more likely cervical spondylosis, to be discussed below, rather than actual protrusion of a soft nucleus pulposus. Myelography may reveal a blunting of the affected nerve root and is diagnostic in a high proportion of the cases. It is not believed that myelography is arbitrarily indicated in these syndromes because the clinical picture is usually very clear cut.

In former days, we described the protruded intervertebral disc as being made up of two forms: (1) The soft protrusion of the nucleus pulposus with a small match head size disc fragment immediately underlying the nerve root. These cause much more severe, acute pain, the pain usually being so severe that the patient insists upon surgery as a means of relieving it.

(2) The so-called hard protrusion, or calcification of protruded disc, in all probability represents an arthritic process involving the intervertebral foramen and the posterior margins of the bodies of the offending vertebrae. This has been aptly called cervical spondylosis recently to differentiate it from the actual protrusion of soft nucleus

pulposus. The pain in these cases is of less severity and is more chronic, although otherwise the clinical syndrome remains the same. In these patients an osteophyte may be seen by x-ray at the intervertebral foramen in the oblique view of the cervical spine. This condition may progress to the point of hypertrophy of ligaments and actual encroachment upon the spinal canal and the spinal cord so that extension of the neck gives a complete block, either by spinal puncture and Queckenstedt test or by the use of radio-opaque myelography. This is apparently merely an extension of cervical spondylosis. In these cases, however, we may have true spinal cord signs indicating that the long tracts of the spinal cord are involved. Obviously, a large extrusion of a cervical disc may cause a quadriplegia and even sudden death, if the extrusion is sudden and large. However, in cervical spondylosis these long tract signs, or spinal cord signs, are rather minimal and are probably caused, as outlined by Dr. Kahn some years ago, by the lines of force being extended to

the spinal cord which is held tightly by the dentate ligament on either side.

A refined technique for surgical alleviation of these symptoms has been worked out (Fig. 1). Under endotracheal anesthesia, a small incision is made in the mid-line and the muscles stripped away subperiostally. The lamina, on the affected side only, is removed from C6 and a small portion of C5 and C7. This allows us to inspect the interspaces between the two most common locations, that is C5, 6 and C6, 7.

It is of interest to note that where there is excessive bleeding, we almost invariably find cervical spondylosis, or the arthritic process mentioned above. Where the bleeding extradurally is minimal, we almost invariably find a protruded fragment of nucleus pulposus or soft cervical disc.

The soft fragment found underlying the nerve root is removed with comparative ease and the surgery is complete. However, more is required in cases of cervical spondylosis and since we feel that as much as possible be done to give relief at one sitting, we usually contrive to do more than a simple decompression of the nerve root by unroofing the intervertebral foramen. If there is an offending osteophyte underlying the nerve root, and if it is accessible, it is chiseled away with a small dental chisel. This is troublesome and the nerve root is possibly in some danger but if the offending protruberance is large enough to be removed, it can be seen and chiseled away.

One of the more efficacious procedures done at this time is to open the dura in a tiny slit just above the nerve roots and divide the dentate ligament on that side. This relieves tension on the cord and allows the nerve roots to be forced posteriorly and thus relieve themselves of pressure. A combination of these three procedures is usually done in cases of cervical spondylosis and is done in all cases where there is a block on hyperextension of the neck, or where there are long tract signs indicating involvement of the spinal cord. In these latter occasions, however, the procedure must be done bilaterally through a wide laminectomy rather than through the usual hemilaminectomy with unilateral division of the dentate ligament.

It has been a matter of considerable gratification to note that probably because of the lack of weight bearing, the surgical treatment of protruded intervertebral cervical

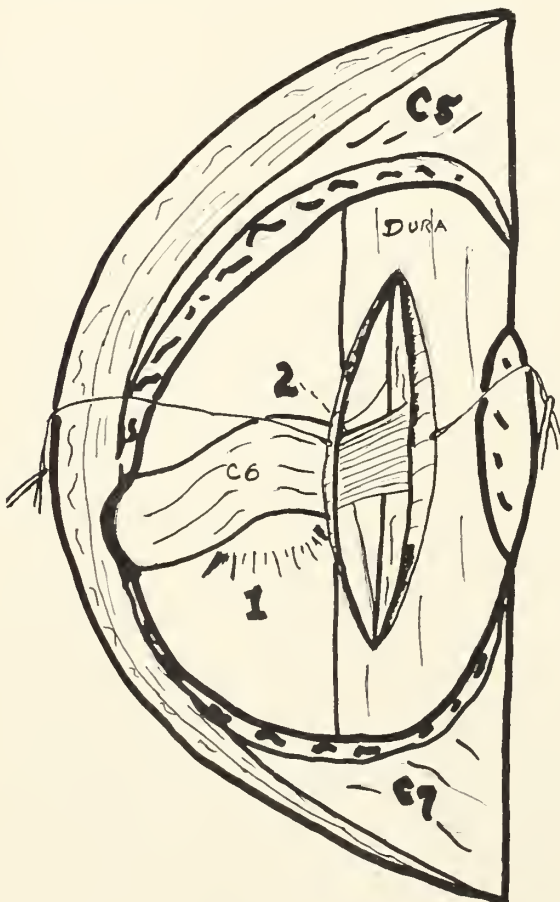


Fig. 1

discs gives a much higher percentage of cure, or relative cure, than surgery for lumbar discs.

The surgery, of course, is much more delicate because of the proximity of the hard spinal cord with the danger inherent to intraspinal work. Morbidity is increased somewhat because of the loss of spinal fluid. The mortality rate is the same, practically nil, and limited to anesthetic accidents. There have been no signs of spinal cord damage with the exception of two cases wherein, following the surgical removal of a large osteophyte and the intradural division of the dentate ligaments bilaterally, we had residual long tract signs which took some three months to clear up. There was, however, no permanent loss of function or impairment of locomotion or sensation. These are the only cases where the spinal cord exhibited change following surgery. There is usually an increased loss of sensation in the dermatomes involved following manipulation of these nerve roots. This loss of sensation has not been permanent in any case and usually clears within three to six weeks. There has been no loss of motor power. There have been no deaths in this series of 87 surgical cases.

I do not mean to neglect the conservative treatment of such neck, shoulder, and arm pain, which is carried out prior to surgery in all cases. The operative cases are those which have failed to respond to conservative treatment, such as neck traction, heat, ultrasonic treatment, x-ray treatment and antirheumatic drugs. When these fail, and the patient complains that the pain is severe enough, we then advise surgery.

It is of interest to note that there are a number of instances wherein combined cervical and lumbar discs occur in the same patient. The old terminology of discogenic disease may have some foundation in fact, since we see rather commonly multiple lumbar discs and also now the association of lumbar and cervical discs. In this series there were 8 combined lumbar and cervical discs.

While recurrence and re-operations are not too infrequent in the surgical treatment of lumbar discs, they are decidedly rare in the surgical treatment of cervical protruded discs. This I am sure has a great deal to do with weight bearing of the spinal column. The lumbar region and the lumbosacral joint suffer the most from bearing the entire

weight of the body whereas the cervical spine supports only the weight of the head.

The dangers of manipulation by the uninformed, or inexperienced, cannot be overstated. I have seen quadriplegia, which is permanent, following such manipulation of an already ruptured cervical disc. I have also seen two patients with virtual quadriplegia who have responded to rather immediate laminectomy and removal of the offending disc following such manipulation. I am familiar with one case of sudden death following such manipulation. It would seem reasonable, then, and even mandatory, to point out the extreme danger of sudden twists or torsion, of jerks, or reduction of so-called subluxations, or any other ill planned or uninformed manipulation for relief of neck, shoulder, or arm pain, or even crick in the neck.

In none of these cases have we used a cast or brace to support the head or neck following surgery. In one early case the combined operation was done with an orthopedist wherein a fusion was done of the cervical spine at the time of the cervical disc removal. No further combined operations are planned.

I think it is possible to differentiate between cervical spondylosis and actual protrusion of nucleus pulposus by the difference in the signs and the degree of the pain. In the actual protrusion of soft nucleus pulposus, atrophy of the involved shoulder and arm is rather rapid. The reflexes may be completely gone rather than slightly diminished. The pain is much more acute and severe, requiring a large amount of opiates, and even then failing to control it. The tenderness of the nerve trunk is dramatic and pronounced. This picture, once seen, is rarely forgotten and added to the usual clinical picture of a nerve root syndrome, one can be fairly confident of the diagnosis of actual protruded cervical disc or nucleus pulposus.

The differential diagnosis of neck, shoulder and arm pain covers many conditions, of course. The typical osteoarthritis of the cervical spine may actually constitute one part of cervical spondylosis. Cervical ribs are revealed by x-ray and by alteration of the pulse or blood pressure and by involvement of the peripheral nerve trunks rather than the roots. The neurologic picture, then, is the differentiating factor.

Subdeltoid bursitis, tennis elbow, and the vascular shoulder-hand syndrome all can be differentiated fairly easily by lack of the neurologic signs. Tumors of the superior sulcus of the lung, *Pancoast's tumor*, have been confused with cervical spine pathology. This may be a long drawn out siege before the actual lung pathology can be found. The presence, however, of Horner's syndrome on that side would cause one to be very fearful of a malignancy in the upper lobe of the lung on that side. Commonly, we are asked to differentiate between *cardiac pain* radiating down the arm and pain emanating from the cervical spine. This cannot be done too easily by means of simple electrocardiography but by the use of the step test associated with electrocardiography and more frequently by the accurate delineation of dermatomes involved, corresponding to certain nerve roots, it can be done clinically.

The total number of patients with the diagnosis of protruded intervertebral cervical disc seen was 176. Of these, 90 were either treated conservatively and responded to such treatment or the patients became dissatisfied and looked elsewhere for help. In two cases legal therapy was efficacious. In three cases scalenotomy, a not infrequent partner, gave relief although the pathology was in the spine. Otherwise, head halter traction, muscle relaxants, and small doses of x-ray therapy sufficed to give relief.

The surgical results can be seen on the chart (Chart I). A total of 87 patients were

operated upon. There were no deaths and no re-operations. We obtained excellent or perfect results in 15 of the soft discs, 79%, and 39 of the 67 cases with cervical spondylosis, a percentage of 59%.

We obtained three good results in soft discs, 16%, and 16 in cervical spondylosis, 24%. This category is defined as only occasional pain in either neck or arm.

We obtained no fair results in soft discs, and 11 in cervical spondylosis, 14%. These patients were improved but had more than occasional pain. We had 1 patient, 6%, with no improvement following surgery in soft discs and 2 patients, 3%, in cervical spondylosis.

Three, or 4%, did not return to their original occupation. None were made worse.

Obviously, then, the soft protruded nucleus pulposus gave the best results. However, in the soft disc group, 94% were either excellent or good results, while 83% of the larger group of cervical spondylosis were in this category. There were more fair results in this group. The single bad result in the soft disc group was a massive extrusion with physiologic cord transection prior to surgery.

All in all, it seems that the surgical treatment of protruded cervical discs is particularly efficacious failing conservative treatment. The soft nucleus pulposus gives the more excellent result but the cervical spondylosis patients were materially benefited.

CHART I
RESULTS OF SURGERY FOR CERVICAL PROTRUDED DISCS
(87 Cases)
Walter G. Haynes, M. D.

	Excellent No pain in arm or neck	Good Occasional dis- comfort in arm or neck	Fair Improved but more than occas. pain	Poor No improve- ment	Back to Work
Herniated Nucleus Pulposus	15 78%	3 16%		1 (transected cord) 6%	18 94%
Cervical Spondylosis	39 59%	16 24%	11 14%	2 3%	66 97%
Total	54 63%	19 22%	11 12%	3 3%	84 94%

A NEW APPROACH TO THE SURGICAL TREATMENT OF OTOSCLEROSIS

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For the past ten years the most popular approach to the surgical treatment of otosclerosis has been the fenestration operation. This procedure, perfected by Lempert of New York, is rather complicated and consumes considerable time to perform. The average time of the performance of a completed fenestration operation is about two and a half hours.

A radical mastoidectomy must be done to expose the bony labyrinth. At the same time, a tympanic flap is created, including skin of the ear canal and drum. Following this, the fenestra is created on the promontory of the cochlea and the flap used to cover it. Postoperatively, the patient is rather miserable for a day or two and must stay in the hospital about six days. Samuel Rosen of New York has devised an operation called the "Mobilization of the Stapes to Restore Hearing in Otosclerotic Deafness." As is well known, the cause of otosclerosis is a change in the bone structure of the labyrinth leading to an ankylosis of the stapes, in this way bringing about a conduction deafness.

The operation is performed under local anesthesia through an ordinary ear speculum in the external auditory canal, with the help of a strong headlight and loupe. The canal is anesthetized with novocaine and adrenalin injections into the subcutaneous tissue of the ear canal, at the junction of the cartilage and bone.

An incision is made through the skin over the bony canal wall 6 to 7 mm. external to the drum, beginning postero-superiorly at the point of junction of the pars flaccida and the pars tensa of the drum, as high as possible. The incision is carried downward along the posterior wall, floor, and anterior wall as far as the point where the pars tensa and pars flaccida meet antero-superiorly. This is done with a special instrument resembling an eye keratome, only much smaller in size.

The skin is then separated from the bone as far as the edge of the drum with instruments resembling little curets. When the instrument enters the tympanic cavity, the drum is progressively lifted out of its

sulcus. It is reflected upward upon itself like an apron. This exposes the incudo-stapedial joint at once. In most cases the stapes is not yet visible and cannot be seen sufficiently to allow safe manipulation; therefore, about two or three millimeters of the very edge of the posterior bony canal just external to the incus and stapes must be removed with a tiny curet in order to get a full view of the long process of the incus, the incudo-stapedial junction, and the head, neck and, sometimes, the crura and the footplate of the stapes. Here also, the facial canal is visible through its entire length, as are the chorda tympani nerve, a portion of the incudo-malleolar articulation, and the inner aspect of the hammer handle. In some cases the chorda tympani nerve must be sacrificed because it obstructs the view necessary for safe manipulation of the stapes.

The mobility of the footplate of the stapes is tested with a fine pointed probe, which is placed against the long process of the incus close to its articulation with the stapes and moved gently posteriorly for a distance of about half a millimeter. When the normal footplate of the stapes is freely movable in the oval window, the slightest pressure of the probe against the long process of the incus causes free and unimpeded movement of the incus, the incudo-stapedial joint, the head, neck, crura of the stapes, and the stapedial tendon. The tendon of the stapedius is the structure to watch at all times, since its movement is the reflection of the footplate movement. The footplate of the stapes moves invariably whenever the head and the crura move, and when this happens, the tendon moves in proportion to the movement of the stapes. These structures can all be seen to move together as one.

When the stapes is rigidly fixed, as in otosclerosis, variable pressure downward against the anterior aspect of the neck, the thickest and strongest part of the stapes, may suddenly loosen the footplate, with immediate improvement in hearing. Any of the pushing instruments should be inserted at the junction of the crura and the neck of the stapes, since this portion of the stapes withstands the greatest pressure

without fracture.

During the operation specially devised delicate suction tubes are used to clear the area of any blood or interfering fluids. When the operation is finished the drum and attached skin of the external auditory canal are placed back in their original positions. The ossicular chain thus remains intact.

In recent months a new instrument has been devised which is used in extreme cases when the footplate will not move with the ordinary pressure on the neck of the stapes. This instrument is inserted directly at the junction at the base of the footplate with the oval window and the footplate itself is very gently prized loose, as one would loosen a cork in a bottle. This procedure does not consume much more than a half-hour—and it can readily be seen how much simpler it is than the original fenestration operation. Another advantage is that it can be done under local anesthesia and the patient can immediately inform the physician when his hearing is restored. This gives the otologist a clue to the fact that the stapes is finally mobilized. There are some objections to this on the grounds of physiology. There are claims that the footplate will again become fastened down with adhesions and the patient is back exactly where he started. However, there seems to be a bright spot on the horizon, from the reports from various sections of the country revealing the fact that after two years 60 per cent have retained practical hearing. Another advantage of the operation is that it can be repeated if necessary.

I might add in closing that it goes without saying that the most important thing to do is screen out these patients as candidates for any type of surgical procedure for the relief of deafness due to otosclerosis. The patient must be in good physical condition and repeated audiograms must prove the fact that the patient has definite clinical otosclerosis. If the audiograms reveal residual nerve degeneration in the higher tones the outcome of any of the procedures are not as good as those in which there has been very little harm done to the auditory nerve by the otosclerotic invasion.

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Pollen Study Suggests Atomic Fall-Out Protection Method—Two Milwaukee researchers have concluded from studies of pollen and mold fall-out that a city should be safer from atomic fall-out than the surrounding country.

Only in the event of a direct hit would the city be more dangerous, Dr. Herman A. Heise and Eugenia R. Heise, M. T., said in the March 9 Journal of the American Medical Association.

They explained that a city is usually warmer than the surrounding country. The rising warm air currents above the city carry solid particles—pollens, molds, and radioactive particles—aloft and keep them there. They fall to the ground when there are no upward air currents, especially when the air nearer the earth is cooler than the air above it.

The researchers suggested that this knowledge could be applied to prevent "the hysterical exodus from a city to a more dangerous rural area in the event of an atomic attack."

The city could be made even safer, they said, by artificially increasing the city's naturally high temperature. This could be done by heating houses, turning on street lights, and opening windows on the leeward side. Even an isolated village or a single residence might derive some protection by lighting fires on the windward side, which would produce upward air currents.

The researchers constructed a model city above which they scattered mold spores. The powder then resembled a cloud that settled slowly and unevenly upon the miniature buildings and lawns. When the city was warmed slightly to a temperature above that of the air, the clouds over the city billowed perceptibly but kept their distance from the ground and were finally dispersed over the rural areas.

The researchers also took pollen and mold samples from the air above and about a city on the west shore of Lake Michigan at a time when the wind was from the southeast. They found that the "country" pollen count, as represented by the count made on the south, or windward, side of the city was the highest. The lowest was on the northwest, or lee, side.

What happened was this: The wind carrying pollens and molds blew horizontally over the country south of the city. Then it met the warm air rising over the city, which pushed up the air containing the pollen and molds. In that case, there was no fall-out over the city.

Fall-out happens this way: When pollens and molds get high enough, they become stable because rising warm air holds them up. When the air below becomes cooler, it stops rising and the pollen falls. For instance, the greatest fall-out ordinarily occurs at night and early morning when radiation from the earth causes the air to be cooler near the earth's surface.

The authors noted that at such times many people who suffer from asthma and hay fever experience their greatest discomfort, which they usually incorrectly attribute to dampness.

Physician Reports Use of New Thyroid Hormone—A New York physician has reported that he has narrowed down the field of thyroid gland substances to the one which appears to be the key actor.

Dr. Elmore M. Fields, Hempstead, N. Y., said in a preliminary report that a recently discovered hormone, sodium liothyronine, worked in thyroid gland illnesses when other thyroid preparations were only partly effective or even caused ill effects.

The report appeared in the March 9 Journal of the American Medical Association.

Dr. Fields used the hormone to treat 100 children suffering from hypothyroidism or metabolic insufficiency. The first is underactivity of the thyroid gland; the second is a condition thought to be caused by the body cells' poor use of thyroid products, and not by an inefficient thyroid gland.

Both hypothyroidism and metabolic insufficiency produce physical and emotional symptoms, including behavior problems, retarded growth, poor appetite, poor circulation, dryness of hair and skin, and constipation. However, in metabolic insufficiency, intelligence is normal, although many patients have poor school records, lack of ability to concentrate, and "don't care" attitudes. In hypothyroidism severe mental retardation and other severe physical symptoms can occur.

Thyroid extract, thyroglobulin, and thyroxin often give satisfactory results in the treatment of both disorders, Dr. Fields said. However, they are ineffective or only partially effective in some children and can cause side-effects such as headache, increased irritability, or abdominal pain.

When he gave liothyronine to 40 children with metabolic insufficiency, the results were excellent in 22, good in 15, and fair in 3. Among 60 children with hypothyroidism the response was excellent in 35, good in 22, fair in two, and poor in one.

In almost all the children, liothyronine gave striking improvement in behavior, circulation, appetite, hair and skin texture, and bowel function, he said. During the original three-month test, the bone growth of many increased as much as 200 per cent beyond that expected for normal children of the same ages. Further treatment for nine months continued to produce improvement, he said.

In general, the response to liothyronine appeared to occur more rapidly than with other thyroid treatments, he said. None of the patients developed side-reactions to the hormone, whereas 22 did after other treatments.

Dr. Fields concluded that liothyronine is an "effective, safe, and well-tolerated form of treatment" for the two disorders and that further studies are warranted.

Constant Head Noises Can Be Corrected—If you constantly hear strange noises—even in a silent room—you don't have to "grin and bear it." The chances are that the condition can be corrected, a Philadelphia doctor said recently.

Head noises, called "tinnitus" from the Latin for tinkling, are often more unpleasant than real sounds. You can always get away from an outside noise, but you can't escape what is inside your head, according to Dr. Albert P. Seltzer, assistant professor of otolaryngology at the University of Pennsylvania Graduate School of Medicine.

Deaf people have the highest rate of abnormal head noises, but they also occur in those with good hearing, he said in the March Today's Health, published by the American Medical Association.

Head noises arise when something produces abnormal stimulation of the hearing apparatus, he said. They may start without warning or develop gradually. They may be soft and purring, tinkling, quite loud, constant, intermittent, or may sound like wood being sawed, steam escaping from a train shed, or water rushing over a dam.

Some people have tinnitus only when falling asleep; others have it in the early stage of anesthesia. The noises may be in one ear or in both. Sometimes they are rhythmical, corresponding to the heart beat. To some people they resemble words or songs.

There are as many causes of head noises as there are types, Dr. Seltzer said. What causes tinnitus in one person may have no influence in another. However, doctors have already learned a great deal about the disorder and are constantly learning more. Under no circumstances should a patient despair of correcting the condition.

Dr. Seltzer explained that noise is normally heard only when sound waves in the air strike the ear drum, setting off a series of reactions in the ear and brain. Head noises occur when something other than external sound starts the chain of events. This may happen when wax or foreign substances block the external ear canal. Middle ear infection or abnormalities in the passage from the middle ear to the throat are also possible causes. All of these can be corrected medically.

Other possible causes, unrelated to the hearing parts, are hardening of the arteries, otosclerosis, head injuries, allergic reactions, disturbances of hormone balance, and lack of essential vitamins. Tinnitus may temporarily follow explosions or loud noises or permanently result from constant exposure to loud sharp noises. Then something should be done to reduce the environmental sound. Tobacco, alcohol, and various drugs such as quinine, aspirin, morphine, and streptomycin also may be causes.

Dr. Seltzer concluded, "Regardless of the causes, whether they be trivial or serious, the symptom should be reported at once to a physician, because the earlier the treatment is sought, the more effective the correction will be."



LIFE POTENTIAL OF THE CENTRAL NERVOUS SYSTEM

The possibility that the life potential of the central nervous system is considerably greater than the average life span in America today was underscored by a recent conference of leading research scientists.

The conference brought together 30 key researchers in the field of neurological and sensory disorders. Dr. Edmund V. Cowdry, research professor of anatomy at Washington University in St. Louis, was honorary chairman for the meeting which was held at the Public Health Service's National Institutes of Health.

Held under the joint sponsorship of the National Institute of Neurological Diseases and Blindness and the National Advisory Neurological Diseases and Blindness Council, the conference was arranged by Dr. Pearce Bailey, Director of the Institute. Conference co-chairmen were Drs. Henry A. Imus, William F. Windle and James E. Birren, all of the National Institutes of Health.

Commenting on the life potential of the central nervous system, Dr. Cowdry asserted that conference discussions had "underscored the hope that the aging process might eventually be susceptible to some measure of control or guidance by scientific means. The fact that people age at varying rates in the physiological sense," Dr. Cowdry said, "is of particular relevance in this connection."

Dr. Bailey termed the conference "a pioneering venture which has opened the way to a coordinated attack against the problems posed by the process of aging in the nervous system."

Some of the conferees noted that recent animal studies demonstrate that there is no significant loss of nerve cells due to aging. They suggested that this may indicate that the central nervous system is capable of life well in excess of the present life span.

Editorials

Experiments in which destroyed nerves in the central nervous system of dogs and cats were regenerated also were discussed. The question was posed as to whether such regeneration was verging on reversal of the aging process. It was felt, however, that too little is currently known about the specific nature and function of nerve cells to permit clear-cut evaluation of this possibility.

The conferees also concluded that there is a distinct shortage of laboratory animals of known age. More guinea pigs, monkeys and other animals, the specific ages of which are known, were deemed vital if adequate research was to be conducted into the nature of the aging process in the nervous system.

The conference was presented with the results of a series of experiments, involving both humans and animals, designed to probe the relationship between age and neural responses. The experiments made it possible to test reactions to a number of different types of stimuli. The evidence was conclusive that aging of the nervous system is marked by slowing in the speed of integration of behavior such as is seen in skilled acts. This change in speed of response seems to be one of the most fruitful points on which to focus further research.

In discussion of the relationship between aging in the nervous system and the cerebral vascular system, some conferees felt that changes in the blood circulation system of the brain (such as arteriosclerosis) did not unduly influence the aging process in the nervous system. There was general agreement that vascular changes were not the only factors bearing on aging in the nervous system.

Among other points made by the conferees were the following:

1. There is a vital need for devising and utilizing new research techniques if the fine interrelationships of the nervous system are

to be understood. The electron microscope and better nerve cell staining techniques are among relatively recent developments which will help create such understanding.

2. Insight into the aging process depends more on detailed knowledge of the physiology of the nervous system than of its morphology. In this context, physiology concerns itself with the function of nerve cells and their interrelationships during life, whereas morphology concerns itself with the form and structure of such cells.

3. The probing of the relationships between cells and of the synapse will probably reveal more about the aging process than will study of the cells themselves. The synapse is that minute area in which one nerve end discharges impulses to another.

NEW DISEASE OF THE NERVOUS SYSTEM

A new disease of the nervous system, described by pediatricians connected with the New York University-Bellevue Medical Center, was reported to the Practitioner's Society by Dr. L. Emmett Holt, Jr., professor and chairman of the department of pediatrics in that institution.

The disease develops in young infants who appear normal at birth but who deteriorate mentally in the course of a few weeks or months and terminate fatally. The disease runs in certain families. A most characteristic feature of the disease is a strong odor resembling that of maple sugar found in the urine. Although the disease has been called "maple sugar urine" disease, the abnormal substance in the urine is not maple sugar.

The first case was described in Boston about a year ago by Dr. John Menkes, now a member of the pediatric staff of Bellevue Hospital. Recently, a former member of the Bellevue pediatric staff, Dr. Sheldon Miller, now a resident pediatrician at the Meadowbrook Hospital, identified such a case. Studies of this patient's blood and urine carried out in the laboratories of the department of pediatrics by Dr. Roland G. Westall and Dr. Joseph Dancis have gone far to explain the nature of the disease and have indicated the possibility that it may be controlled by diet. This disease is due to an abnormality of the metabolism of three important amino acids—leucine, isoleucine and valine. These amino acids, which are among the human dietary essentials, are

not handled normally; they accumulate in the blood and affect the composition of the urine. Although the nature of the metabolic disturbance was not identified in time to save the present patient, it is now felt that other patients so affected could be saved by adjusting the amino acid composition of the diet.

Disease Resembling Scarlet Fever Described—

An apparently new disease with symptoms resembling those of scarlet fever, but without its seriousness has been reported by a Pennsylvania pediatrician.

Thirty cases were seen at the State Hospital for Crippled Children, Elizabethtown, Pa. from Nov. 4, 1955, to April 4, 1956, Dr. Mary D. Ames, Harrisburg, Pa., said in the American Medical Association's February Journal of Diseases of Children.

The scarlet fever-like symptoms were fever, sore throat, and a generalized, bright red rash. However, no streptococci, the causative agent of scarlet fever, were isolated from the throats of the patients and there was no scaling of the skin as in scarlet fever.

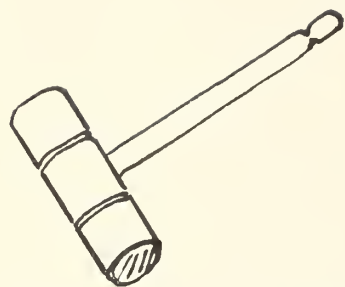
Dr. Ames pointed out that it is very important to distinguish between this new disease and scarlet fever because of the hardships that would follow wrong diagnosis. A diagnosis of scarlet fever means that the patient must be quarantined for at least seven days. In Pennsylvania, other persons residing on the premises cannot handle or sell food, milk, candy, beverages, or tobacco. The child loses time at school and the adults may be cut off from necessary income, she said.

The rash in the new disease was present over the entire body, neck, and extremities, but was particularly marked on the groins and the back of the trunk. In scarlet fever the rash begins on the neck and later appears on the trunk and groins. The rash was also different from the characteristic rashes of red measles, German measles, infectious mononucleosis, and other known feverish eruptions.

Twenty-three children who were patients in the hospital, two doctors, two nurses, and a doctor's wife and two children were ill. The children were not remarkably ill and continued to be alert and active, but the adults were incapacitated for 24 to 48 hours with marked discomfort and weakness, Dr. Ames said.

The method of spread and the incubation period were hard to determine, she said. After the first two cases, the children were not isolated and the cases were rather spotty in the wards. Three times as many females as males had it.

The onset was abrupt with fever, sore throat, and general discomfort, followed in 12 to 48 hours by the appearance of the rash. Nausea and vomiting occurred in 17 patients, abdominal pain in 20, and signs of an upper respiratory infection in four. The average length of illness was three days. There were no complications. The course of the illness was not influenced by medication, she said.



President's Page

MYSTERY, MAGIC AND MEDICINE

It is difficult for us, who live in this the greatest day in medicine, to realize the hazards of life that existed in bygone days. The medicine of savage people did nothing to prolong life or alleviate suffering except through its influence on the mind. It is hard for us to believe that the average length of life was eight years five hundred years ago. Today the average length of life in America is close to seventy years. One can give credence to the statement, then, that medical science is the strongest force acting in modern civilization toward human betterment. Modern civilization is only made possible by modern medical service.

In the days before Hippocrates, Grecian medicine was in the hands of a religious organization, the Priests of Aesculapius. The deified Grecian hero of medicine, Aesculapius, was represented as a bearded man of kindly mien holding a staff about which twined a snake, the Caduceus, the emblem of the physician to this day. He was said to have had two daughters, Hygeia and Panacea.

Hippocrates separated medicine from religion, philosophy, mystery and magic, and gave to medicine art, science and ethics, which was destined to become the guiding influence of all great medicine men. Hippocrates was the first to sit by his patient and painstakingly seek out symptoms and record them. He took clinical case histories, and he founded the bedside methods that were to become the attributes of all great physicians. He founded the art of diagnosis and prognosis. The descriptions of diseases left by Hippocrates were based on keen and careful observation; they stand today as models of their kind. After his time, such accurate observations were not made again in medicine for over eighteen hundred years.

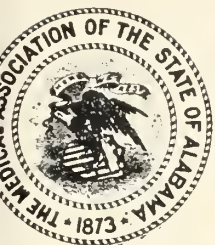
Three hundred years after Hippocrates, Corinth was destroyed by Roman Armies

and Grecian Medicine was taken to Rome.

Only once did Roman Medicine rise to near the dignity given to medicine by Hippocrates. This was the century of the Christian Era. In this era Celsus, Dioscorides, Aretaeus and Galen were the leading Roman physicians and scientists. Celsus compiled, in an encyclopedic manner, the medical knowledge of his day. His writings were famous for their knowledge and their elegant literary style. Dioscorides gave to the world the first materia medica. He described over 600 plants, and more than 90 are still in use today. Aretaeus was a very accurate clinical observer and it is to him that we owe classical accounts of pneumonia, tetanus, empyema and the aura of epilepsy. Galen was a great physician, but he lacked the intellectual honesty of Hippocrates. He had an answer for every question and an explanation for every phenomenon. Although his logic was good, his premises were often bad; but it was his logic and his dogmatism that appealed to the men of subsequent centuries. His works became the guiding influence and the final authority in all medical matters until, in fact, it was almost to become a heresy to doubt Galen.

Even in Galen's time the Roman Empire was declining. Many causes have been given for the decline—social, political and economic, but there was also a medical one. Plagues and pestilences increased in prevalence. Rome fell to the barbarians, but before it fell medicine had deteriorated. Venders of quack remedies had their shops on every street; the calling of the physicians had passed into the hands of professional poisoners and courtesans who peddled drugs. Medicine ceased to be a science. It again became mystery and magic.

Grady O. Segrest



ORGANIZATION SECTION

BOARD OF CENSORS MEETS

WILLIAM CRAWFORD GORGAS AWARD

At the meeting of the Board of Censors on February 20, an award was approved for lay persons who have been outstanding in health work. The presentation of such an award was proposed by the Committee on Medical Service and Public Relations. The name *William Crawford Gorgas Award* was chosen by the Advisory Committee, which submitted the proposal to the Board with recommendation for approval.

A maximum of one award for each division of the Association will be presented at the annual meeting, beginning in 1958. The Vice-President of each division will select two physicians and two newspaper men to serve as a nominating committee for the award to a person in his division. The name of the nominee from each division will be forwarded to the Committee on Public Relations for final approval.

POLICY ON PUBLICITY FOR GUIDANCE OF MEMBERS.

Last fall, the Committee on Medical Service and Public Relations recommended that the Association adopt a policy on publicity. The statement of policy was divided into two sections, and the Board of Censors approved the first section at its December 16 meeting. It is titled *Guiding Principles for Participation in Telecasts and Broadcasts* and appeared in the February issue of the *Journal*.

The second section of the policy has now been cleared by the Advisory Committee and approved by the Board. It is printed below, and members are urged to read both sections of the policy and be guided accordingly.

POLICY ON PUBLICITY FOR GUIDANCE OF MEMBERS

1. Participation by physicians in civic and community affairs is encouraged. Therefore, the use of the physicians' names in connection with such activities is considered to be proper. Such use should avoid

reference to professional qualifications, skills, successes and accomplishments.

2. Articles on health and medical topics published for public distribution using a physician's name and/or photograph should be done only on invitation by The Medical Association of the State of Alabama or the component society, and according to plans outlined by the Public Relations Committee of the society.

3. Use of a physician's name in connection with the treatment of a particular case may be of public interest. However, such use creates embarrassment and criticism and should be avoided.

4. In emergency or accident cases, the attending physician may release general information when it does not violate the confidential relationship between doctor and patient. In any event, only the general nature of the injury should be given; the patient's condition should be described simply as good, fair, serious, or critical. Statements about poisoning (except accidental), suicide, intoxication, drug addiction, or moral turpitude should be avoided. Use of the physician's name should be avoided.

5. Caution should be exercised to avoid purely personal publicity, particularly about the physician's own practice, his professional attainments, and accomplishments.

6. Names and photographs of physicians taking part in official medical meetings may be released when requested, as may amplification of speeches before such meetings. However, it is desirable to give preference to non-local physicians when reporting medical topics.

7. Officers, spokesmen, or committee chairmen of the medical society may be quoted by name in matters of public interest, to authenticate publicized medical information.

8. Voluntary health agencies, hospitals, and other institutions fill an important place in the general health education of the public. These should be aided in their over-all

program of interpretation. They should, however, adhere to the general policies of the profession in matters of publicity involving physicians. Feature articles and news stories, in which a photograph or name is important, should make use of house staff members and other full-time personnel, rather than practicing physicians.

9. Before any physician lends his name and support to a voluntary health agency, he should be sure that the group activity has been approved by the Public Relations Committee of The Medical Association of The State of Alabama and the county board of censors of his respective county medical society. His participation with this group should adhere to the policies set out in this guide.

10. Physicians will be invited on occasion to give public addresses on health topics. These should be accepted, within reason, and, when delivered, it is inevitable that there may be some reference in the press. This is not considered to be improper, when the other general policies are followed.

11. A member of the society who may not be sure if it would be proper to accept assignments or invitations of a public nature should always consult the proper officials of the society.

12. Members of MASA or a component society who are invited, or who desire to appear on a radio or television program, should clear such appearance with the Public Relations Committee of the society.

13. Members should not appear on such programs more than 3 times in any year, unless specifically approved by the Public Relations Committee.

14. The physician shall be introduced by name only, or it may be stated that he is a member of the county medical society, or a member of a committee thereof. Reference to his specialty should be avoided. There shall be no mention of his methods of treatment, special qualifications, educational background, or laudatory information.

15. Physician appearance on a commercially sponsored program may be approved by the Public Relations Committee when circumstances appear to warrant; but generally such appearances are not encouraged.

16. Physicians appearing on programs shall present themselves with proper professional decorum at all times, in a manner befitting the dignity of the medical profession.

17. Physicians shall not discuss drugs or methods that have not been generally accepted by the medical profession.

18. In the public announcement or advertising relative thereto of openings of medical office buildings, there should be no listing of physician occupants.

19. When individuals or groups announce the opening of their own offices or clinics, the distribution of such announcements should be limited to mailing of cards to colleagues and to patients on his records.

20. The name of a county medical society should not be used in connection with commercial advertising to the lay public.

The Medical Association of the State of Alabama.

Adopted by The Board of Censors of The Medical Association of The State of Alabama at its meeting in Montgomery, February 20, 1957.

A. M. A. Foods Council Calls Low-Sodium Milk Useful—The Council on Foods and Nutrition of the American Medical Association said that low-sodium milk should be "extremely useful" to persons who must restrict their sodium intake.

According to a statement in the March 2 Journal of the A. M. A., low-sodium milk is liquid whole milk which has been processed to remove more than 90 per cent of the normal amount of sodium.

Sodium-restricted diets are used to counteract fluid retention by the body in such conditions as congestive heart failure, cirrhosis of the liver, certain kidney diseases, toxemias of pregnancy, and high blood pressure. Some common sources of sodium are table salt, baking powder, and baking soda.

A doctor's ingenuity is often taxed when he must suggest a diet that is tasty, high in protein, and yet low in sodium. If milk is omitted, it becomes difficult to obtain the necessary amounts of protein, calcium, and riboflavin. The necessity of restricting the intake of meat and other protein foods which are high in sodium makes the potential value of milk even more evident, the article said.

The sodium is removed from the milk by a process in which it is replaced by potassium. While the potassium content is about doubled, it is still within the safe range of intake for adults.

In many other nutrients low-sodium milk compares favorably with whole milk, the statement said. However, in planning a diet allowance must be made for the fact that the amounts of thiamine, niacin, and vitamin B₁₂ are about halved, while calcium and vitamin B₆ are reduced by about one-fourth.

To help physicians plan diets which include low-sodium milk, the council suggested tentative levels for nutritious ingredients based on the findings of laboratory tests, according to Philip L. White, Sc. D., secretary of the council. It urged producers to make periodic analyses of their milk so that the physician is assured that it meets these nutrient levels.



ASSOCIATION FORUM

HOW WE DELIVER TODAY'S MEDICINE TO OUR PATIENTS

J. MICHAELSON, M. D.
Foley, Alabama

In the beginning of medical history, formal medical education simply did not exist. He who was interested in medicine practiced medicine. There were no rules or regulations—just the oath of Hippocrates, with which you are all familiar, if not in its content at least in the fact that such an oath exists. Success of treatment was on a trial and error basis. At this stage of medical history not only was an interest in medicine necessary but the motivating factor that gave men the impetus to go into medicine was an innate desire to help a fellow-being who was suffering, to be of service to his fellowman, to succor those troubled in mind or in body. This fact is as true today as it was in the beginning. We all know that true altruism is a rare quality indeed, but every doctor, if he is worth his salt, must have a measure of it in his make-up if he is to render the best possible service to his patients, if he is to be a true physician, if he is to be capable of delivering today's medicine to you, the consumer public, in a manner in keeping with the highest traditions established by his predecessors, the great family of physicians.

Late in the Nineteenth Century, this philosophy of trial and error, this reliance on time and fate and a few mechanical skills only, changed. From laboratories and centers of research came new discoveries. Age old mysteries were solved. Each new fact or bit of information unlocked the door to more facts and more information. The empirical approach was abandoned—the scientific approach had arrived. New drugs have been discovered, new methods have been developed, new techniques based on the experience gained from a series of thou-

sands of cases have come to the fore. The race to gain more and more information about man and his infirmities, the constant battle against disease and death, has equipped us with a vast ever-changing storehouse of knowledge almost beyond comprehension. The knowledge of the science is great. It is not for one alone to know it all. Therein lies one of the important reasons for the existence of a family doctor, why it is imperative for you to have an individual doctor who is responsible for your complete medical care if you are to avail yourself of the best medical care in the world today. There is no denying that the individual who completes successfully the complicated, varied, scientific curriculum of the modern medical school is an educated medical scientist. Our graduates today, however, are educated far beyond their wisdom to practice the Art of Medicine. Medical character and wisdom can best be developed in the stream of life of a rural community. It is here that the young doctor will learn to observe man as a unit composed of many facets which include a soul, emotions, desires, prejudices, ambitions, character, an intellect, as well as a body containing an appendix to be removed, eyes to be refracted, lungs that succumb to the ravages of pneumonia, tuberculosis or cancer. It is here that he will observe the complex interrelationship of these many facets that go to make up a man-unit. It is here that he will learn that an appendectomy entails more than the application of technical skill at the operating table for a comparatively short period of time, in that it also includes convincing a patient of the accuracy of a diagnosis, taking a breadwinner away from his job, the economic burden of hospital bills and surgeon's fees, an anxious wife or family to be comforted, as well as the responsibility for a human life.

Delivering today's medicine to you taxes the knowledge, skill, integrity, fortitude,

and endurance of today's doctor to the utmost. Let me hasten to add that this is not a plea for sympathy for "dear old Doc," for the rewards, even though often intangible, are many. The true physician takes these tribulations in his stride, as all in a day's work, and counts his blessings in suffering relieved and patients cured.

We have done our part as physicians. We have spent many years in medical schools and in hospitals training for our task. We fight a ceaseless battle to keep up to date on everything new, by constant reading and study, by attending meetings, and by frequent visits back to the medical schools. We have equipped our offices and clinics with the latest and most modern scientific equipment and diagnostic apparatus, such as x-ray machines, B. M. R. and E. K. G. machines and complete laboratory facilities. We have trained and hired the necessary ancillary personnel to help us make a diagnosis and render treatment, often at a great financial sacrifice.

However, all of these wonderful advances in modern medicine are worthless unless we, as physicians, can make them available to you, the individual patient, the consumer public. All of this means nothing to you, as Mr. Farmer, or Mrs. Housewife, as an individual, until such time as you present yourself to your personal physician for his expert care. The best medical care available in the world today is yours for the asking, even in a rural community, or, should I say, especially in a rural community. But *you* must do your part. Satisfaction of your desire for superior medical service, and we all want the best in illness and in health, and the physician's desire to provide it for you calls for just one simple effort on your part. Everyone of you must establish a close relationship with a doctor whom you have chosen to be your family physician, the manager of all of your medical affairs, someone in whom you can put your complete trust and confidence. This relationship will establish a foundation upon which complete understanding between physician and patient can be attained. This, in itself, will provide the answer to most of the medical needs of every person or family in this great nation of ours.

Once this has been accomplished we are ready to deliver to you today's medicine. We have prepared ourselves to deliver the goods and you have established the fact

that you are a willing recipient of what we have to offer.

Let me cite for you a few specific incidents of how we deliver the goods. Of course, I must draw on my own experiences in my own office for examples of how this relationship pays off. To the uninitiated these may appear to be dramatic figments of fiction, but let me assure you that they are commonplace, that they are every day occurrences, that these things are taking place in doctor's offices and clinics in rural communities across the Nation at this very moment. These are the episodes of daily life and death that rarely reach the headlines of newspapers, and so few people, other than those immediately concerned, ever hear of them, but these are the things that your doctors in your rural communities are doing daily, without fanfare, and usually without thought of recompense or remuneration.

Pete L. was a fine husky, strapping lad of seventeen years. Pete had gone out for the local high school football team. Before the season everyone had anticipated great things from Pete because of his apparent outstanding physical prowess; but for some reason Pete just couldn't make the grade. Many accused him of lacking in desire or even in intestinal fortitude. Pete's classroom work began to suffer and he was in danger of failing several courses. He had several quarrels with his girl friend. His relationship with his parents became more and more strained. Pete was about ready to throw in the towel for good when his mother brought him in to his family doctor. You can imagine the mental state Pete was in as he sat across from me with his head in his hands, a whipped boy. Even though Pete had been lax about visiting his family doctor regularly, I had known him for many years and knew that he was made of sterner stuff and that something must be organically wrong with the boy, and that he was not a candidate for a psychiatrist's couch. A recent history, together with a complete physical examination, urinalysis and glucose tolerance test, all done in the office, revealed that Pete was a severe diabetic. A well regulated diet, the proper dose of insulin, and reassurance have restored Pete to his former rightful position of esteem, in the eyes of his classmates, his parents, his girl friend and in himself. A tragedy has been averted.

Next case, Mrs. Brown.

"Frank S. to see you, Doctor." "Doc, I have had a bad cold for two weeks now and I can't wear it out. I've taken a purgative, 4-Way cold tablets, Vicks Vapo-Rub, and just about everything else they have in the drug store, but I'm not any better. I thought you could give me a shot of penicillin and get rid of my cold." A recent history, a little detective work, a physical examination and a few simple laboratory tests revealed that Frank had an allergy to a new spray that he had started using on his farm two weeks previously. This case points out two important considerations: the fallacy of self diagnosis and self medication, and blind faith in the presumed panacea of the wonder drugs. Even today, it is necessary to make an accurate diagnosis before the wondrous wonders of world-wide research can be successfully administered.

When I sat down to prepare this dissertation, my nine year old son, Freddy, inquired of me, "What are you writing about, Dad?" When I told him that I was preparing a talk on "How We Doctors Deliver Today's Medicine To Our Patients," his reply was, "That's easy, just tell them that you give 'em a few shots and some pills." His simple analysis was apparently shared by Frank S. Even among doctors, not too many years ago, it was often said in jest, in a complicated case—"Give him penicillin for three days and if he doesn't get well, we will make a diagnosis."

Our forefathers didn't practice medicine this way. They couldn't. They had to make an accurate diagnosis. This is just as true today. They had no panacea for all ills. Neither do we, but we have much more to offer as specific treatment once a diagnosis is made, and the future looks even brighter. Tomorrow many of today's dilemmas will be solved and be commonplace knowledge. Today we can discover our errors of yesterday, and tomorrow we may obtain new light on what we think ourselves sure of today.

The telephone jangles—for some reason a doctor's telephone always jangles, it never just rings. The call was immediately transferred directly to me by the receptionist as it was an emergency, "Doctor, I am calling for Pat T. He just ran over his little boy with a disc and he is on the way to the office with him." "God help us, Doc." I hastily added an Amen and ran to be sure our emergency room was prepared to re-

ceive the injured lad. Thanks to the wonders of modern transportation, Pat arrived shortly with his son, who was in a critical condition. A rapid examination revealed that he was in profound shock and that his neck was severed down to the vertebral column, just narrowly missing his jugular vein, his right arm had multiple compound fractures and lacerations, a large area of skin had been torn from his abdomen, there was a question of internal injuries, and there was the possibility of a head injury. It was immediately apparent to me that, to save this little boy's life, the first team would have to go into action and soon. I hastily administered a drug for pain, controlled the severest hemorrhage, and started intravenous fluids to combat the shock. As I climbed into the ambulance with the injured boy and his father, I handed my nurse a list of four doctors to call and notify of the emergency. These men, all specialists—a general surgeon, a neuro-surgeon, a plastic surgeon, and an anesthetist, were all friends of mine, men with whom I had long since established a working relationship and an excellent rapport based on mutual confidence and trust in the calibre and standard of the work each of us was doing. They respect the general practitioner and I respect them. We are a team.

My nurse knew from previous experience to alert the hospital of our arrival. A quick check of our office records revealed the boy's blood type, that he had previously been immunized against tetanus, and that he had no known drug allergies, and this information was relayed to the hospital. When we arrived at the emergency room of the big hospital in the nearby city, all four of my specialist friends were there waiting, a laboratory technician was there to draw blood immediately for typing and cross matching for a transfusion; an x-ray technician was available to take x-rays. The fluids that I had started were still running. There was no delay. Each of the surgeons immediately evaluated the boy from the standpoint of his own specialty; then we formulated a plan of action which I was to direct, even though each of the specialists had a job to do if this lad was to live to be a useful citizen. Needless to say, each of the men performed his task skilfully and expertly. We are all proud of the fact that Pat's son will be one of our starting half-backs next year. Dramatic? Yes. This is

today's medicine at work. This is the type of medicine available to you in a rural community, but only through your family physician.

The assembling of the necessary amount of medical know-how at the right spot at the right time to meet this type of an emergency just doesn't happen. It comes from much previous planning and the experience of many years of training. This was so aptly demonstrated just recently in California when two airplanes collided over a school yard full of small boys. There is no question in my mind that previous planning and teamwork saved many lives during this ghastly catastrophe.

If time would permit, there are many, many more examples that I could cite for you, such as the Negro woman living eighteen miles out in the woods who was found in insulin shock; the Mexican workers who almost died of tung nut poisoning; the Creole child who needed a heart operation; the farm family of five children that was almost wiped out by rat poison; the bank president who went berserk during banking hours; the little Negro boy who gets his periodic blood transfusions in the office; the tug boat captain who had the ruptured peptic ulcer; the thirty-five year old farmer's wife who had cancer of the cervix; the multitude of broken arms, pneumonias, sore throats, abscessed ears and broken hearts that we see every day.

The credo by which most doctors work—to cure sometimes, to relieve often, to comfort always—is the essence of good sound medicine based on the foundation of a satisfactory physician-patient relationship. To cure sometimes—our rate of cure is much higher today, our patients live longer thanks to our better training, modern diagnostic methods and research and the advent of the wonder drugs and more forms of specific therapy. To relieve often—here again our batting average is higher thanks to the many modern drugs and methods at our disposal.

To comfort always—this portion of our credo has not changed, nor will it change regardless of what tomorrow's medicine has to offer.

This is today's medicine. This is how we deliver it in rural town, U. S. A. This brand of medicine is available to you across the Nation. It is yours for the asking.

Financial "Helping Hand" Given to Doctors—
A "helping hand" movement for doctors needing financial assistance to complete their training or establish their practices is spreading throughout the United States.

A recent survey showed that more than one million dollars is annually available in medical scholarships and loan funds, according to a special article in the February 9 Journal of the American Medical Association.

Many programs are geared to help the doctor at a critical time in his career—when his basic medical education is over and he is at the end of his financial rope.

Leading this movement is the Sears-Roebuck Foundation with its long-term unsecured loans of up to \$25,000 for needy doctors in medically needy communities, the article said. The plan benefits new physicians who are unable to meet all the costs of starting a practice and established physicians who are unable to raise enough funds to move their practices to communities lacking doctors.

Two years ago Sears Foundation President Theodore V. Houser proposed the project as a way to solve the problem of doctor distribution. He reasoned that if moves by large companies to rural and suburban areas were meeting a community need, then the same idea could work for medicine.

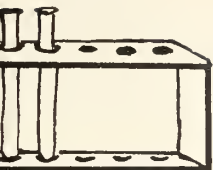
The Foundation annually puts \$25,000 into a revolving loan fund, which is administered by an advisory board of leading physicians appointed by the A. M. A. trustees. Loans are given to doctors who have shown that medical practice units are needed in their communities and that they have exhausted all other means of financing their practices.

Some loans are greater than the amount asked, while others are pared down. In fact, the foundation helps more physicians who do not get loans than those who do, the article said. One-fourth of all applicants so far have received loans, while more than half have received sound, helpful and free business management advice—which made loans unnecessary.

The net effect of these foundation efforts in helping doctors to help themselves has been to "seed" medical facilities far beyond the face value of the borrowed money. In its first 18 months, the fund loaned \$261,000, which represents the "key cash" responsible for \$780,000 in new buildings, \$83,000 in remodeling, and \$72,000 in new equipment. Physicians obtained the rest of the money from local sources.

As loans are repaid, the revolving fund will grow into millions and new facilities will reach still more communities in need of adequate medical care.

Among the other funds available to the young doctor is that of Mead Johnson and Company, a pharmaceutical firm. It annually allocates \$1,000 to each of five medical academies for graduate training of five new physicians.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

CHRONIC ILLNESS EVERYBODY'S BUSINESS

Contributed by

Martha Terry, Director

Division of Public Health Education

The National Health Council, whose members are fifty national health and welfare organizations, annually conducts the National Health Forum for the consideration of a currently pressing health problem. The problem for the 1956 Forum was what one of the speakers called the mounting "daily disaster of chronic illness." The words of some other participants and interested persons tell us why chronic illness is a national health problem of major importance.

President Eisenhower's message to the Forum read, in part: "Chronic illness accounts for almost three-fourths of the Nation's daily sickness toll. There is urgent need both for more research into such diseases and for prompt and widespread application of existing knowledge."

Leonard W. Mayo, chairman of the Commission on Chronic Illness and Director of the Association for the Aid of Crippled Children, was the keynote speaker. He pointed out that chronic diseases account for 88 per cent of all disabling conditions in the United States.

Dr. Theodore Klumpp, President of the Winthrop Laboratories, said that estimates of the Commission on Chronic Illness show that approximately 28,000,000 persons in the United States—one out of every six—suffer from some known physical or mental impairment. According to mid-year population estimates for 1955, this would mean that about 540,000 Alabamians suffer from some kind of disability. Thus, we see that, from the standpoint of numbers alone, chronic illness is our number one health problem.

From other standpoints the problem appears equally urgent. Looking at it as a matter of national welfare, we cannot afford

the waste of human resources. Not all of our 28,000,000 citizens with impairments are disabled. Many work and contribute to the national economy. Many of them, however, *are* disabled! We need to find ways to help them become useful, productive members of society.

There is the humanitarian viewpoint. Can we overlook the suffering of chronic illness victims and the hardship which may come to their families because of the illness?

Or look at the problem as a matter of dollars and cents. The economic loss to private citizens and to the public is tremendous. The chronically ill person is subject to loss of income because of inability to work. At the same time, his medical expense may be increasing to the point that he cannot handle it alone. He may have to seek help from public or private agencies.

Suppose you have a neighbor—a man with a wife and three children—who suffers a stroke and is bedridden. Have you ever wondered who supports such a family while the father is disabled? And remember that the disability may be permanent. It is you and your community who support them. After the family has exhausted its own resources, it may have to turn to a welfare agency for aid. If the welfare agency is a public one, it is supported by your tax dollars. If it is a private one, its income is derived from your contributions. In addition to paying the taxes and making the contributions which support these agencies, your community has lost the victim's productive capacity, his material contributions, his tax dollars.

These are the reasons that chronic illness is not just the problem of the patient, his physician, and his family. It is the problem that concerns us all, as individuals and as community members.

What is chronic illness, and why has it become a problem of such proportions? Ironically, the size of the problem has its roots in medical progress. By conquering the diseases of early life, science has increased man's life expectancy to such an

extent that he lives long enough to become the prey of disabling diseases. This does not mean that chronic illness attacks only old people. No age group is immune. Chronic disease often strikes during the most productive years of life. The relation to age is significant, however. Disabling illnesses occur 13 times as often for those over 65 as it does for those under 45.

The chronic illnesses bear familiar names—heart disease, diabetes, tuberculosis, mental illness, arthritis and rheumatism, and epilepsy among others. Added to these illnesses are the disabilities due to blindness, accidents, or congenital abnormalities.

The Commission on Chronic Illness defines chronic illnesses as "all impairments or deviations from normal which have one or more of the following characteristics: are permanent, leave residual disability, are caused by non-reversible pathologic alteration, require special training of the patient for rehabilitation, may be expected to require a long period of supervision, observation, or care." To simplify this definition, we can say that they are the long-lasting illnesses as contrasted to the acute diseases which generally run a prescribed course and are followed by recovery. Chronic illnesses last for months or years, or maybe for life.

Today, there are two main methods of attack which are being used against chronic illness. The first, and most important, is prevention. There are two kinds of prevention. Primary prevention attempts to keep disease from developing at all. For example, prompt treatment of "strep" infections will prevent most cases of rheumatic fever which leads to rheumatic heart disease. (This, by the way, is one of the chronic illnesses which usually strike young people.)

Then, there is secondary prevention. This kind of prevention calls for early discovery and treatment of disease to minimize and reduce disability. Treatment of diabetes is an example of secondary prevention. Since the discovery of insulin, diabetes need not be a disabling disease. Under the direction of a physician, diabetes can be controlled by a program of daily insulin injections, diet, exercise, and rest. A given diabetic may require any or all of these forms of treatment. Our point here is that proper treatment will permit him to lead a normal life.

The second method of attack is rehabilitation. Through rehabilitation, chronically ill or disabled persons may be trained or retrained to become productive members of society. It is admittedly an expensive process, but it is not as expensive as the long-term care and support which may be its alternative. Reports of the Office of Vocational Rehabilitation of the U. S. Department of Health, Education and Welfare show that 58,000 persons were rehabilitated into employment in 1954. Their earnings were increased from \$16 million a year prior to rehabilitation to \$104 million. It is estimated that these people will in four years pay back in Federal income taxes more than was invested in their rehabilitation.

The medical profession, public health and welfare agencies, and national and local voluntary agencies have long been aware of the problem of chronic illness. The Commission on Chronic Illness, which we have mentioned several times, was founded by the American Medical Association, the American Hospital Association, the American Public Health Association, and the American Public Welfare Association in 1950 to help define, identify, clarify and classify the problem of chronic illness.

Public agencies fight chronic illness through programs of prevention and education. Alabama's State and County Health Departments, for example, operate cancer clinics, cardiac diagnostic clinics, mental health clinics and mass x-ray surveys which are active in the secondary prevention programs we mentioned earlier. Their purpose is to find disease so that treatment can be started in the early stages when it is most effective. Voluntary agencies such as the American Heart Association and the National Association for Mental Health support programs of research and education in the battle against chronic disabling conditions.

These agencies and organizations cannot succeed alone, however. They need our help as individuals and as community members to support and carry out their programs.

On an individual basis, we can pay close heed to personal health to help prevent chronic illness from developing in our own families. We can learn the warning signals of disease and seek medical care promptly when any of these signals appear.

As community members we can lend our support and encouragement to new and existing programs. For, in the words of Leonard W. Mayo in the keynote speech to which we referred earlier, "Chronic illness is no longer the exclusive and private business of the patient and the healing professions. It is a matter of public concern in an age when, for humanitarian reasons and for reasons of defense, the Nation is more conscious than ever before of the need for conserving human resources. In such an age, illness, disability, and preventable death are problems the whole community must comprehend and help solve. The time-honored confidential relationship between the physician and his patient has limited value unless it is supported and enhanced by the presence in the community of adequate treatment facilities. Hospitals, clinics, nursing homes of high standard, and like facilities come only as the direct result of citizen interest and community action."

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

January 1957

Examinations for diphtheria bacilli and Vincent's	78
Agglutination tests	673
Typhoid cultures (blood, feces and urine) ..	564
Brucella cultures	4
Examinations for malaria	58
Examinations for intestinal parasites	3,356
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	26,157
Examinations for gonococci	1,500
Examinations for tubercle bacilli	3,895
Examinations for Negri bodies (smears and animal inoculations)	239
Water examinations	1,838
Milk and dairy products examinations	5,384
Miscellaneous examinations	680
Total	44,430

Satisfaction over the saving of lives of tuberculosis patients is tempered by the realization that even today 400,000 persons in the United States alone are handicapped by tuberculosis, that another 50,000,000 or more are unwilling hosts to live tubercle bacilli, that tuberculosis is costing this country \$600,000,000 a year, largely in tax dollars.

The drive against tuberculosis in the United States is spearheaded by the U. S. Public Health Service, state and local health departments, and the voluntary associations affiliated with the National Tuberculosis Association.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1956

	Nov.	Dec.	E. E.* Dec.
Typhoid and paratyphoid ..	2	5	3
Undulant fever ..	0	0	3
Meningitis ..	11	17	7
Scarlet fever ..	223	402	71
Whooping cough ..	59	17	70
Diphtheria ..	13	16	28
Tetanus ..	1	1	3
Tuberculosis ..	111	158	185
Tularemia ..	1	0	0
Amebic dysentery ..	3	1	0
Malaria ..	1	0	1
Influenza ..	111	103	302
Smallpox ..	0	0	0
Measles ..	209	445	103
Poliomyelitis ..	15	11	10
Encephalitis ..	1	1	0
Chickenpox ..	167	88	210
Typhus fever ..	0	1	1
Mumps ..	53	151	71
Cancer ..	452	396	402
Pellagra ..	0	0	1
Pneumonia ..	159	177	216
Syphilis ..	125	99	230
Chancroid ..	5	2	9
Gonorrhea ..	287	244	317
Rabies—Human cases ..	0	0	0
Positive animal heads ..	18	31	0

1957

	Dec.	Jan.	E. E.* Jan.
Typhoid and paratyphoid ..	5	0	3
Undulant fever ..	0	0	2
Meningitis ..	17	12	10
Scarlet fever ..	402	444	75
Whooping cough ..	17	22	63
Diphtheria ..	16	6	20
Tetanus ..	1	2	1
Tuberculosis ..	158	124	178
Tularemia ..	0	0	2
Amebic dysentery ..	1	3	1
Malaria ..	0	0	1
Influenza ..	103	168	1393
Smallpox ..	0	0	0
Measles ..	445	685	213
Poliomyelitis ..	11	4	6
Encephalitis ..	1	1	1
Chickenpox ..	88	119	296
Typhus fever ..	1	1	3
Mumps ..	151	133	141
Cancer ..	396	665	349
Pellagra ..	0	0	1
Pneumonia ..	177	168	391
Syphilis ..	99	108	220
Chancroid ..	2	2	6
Gonorrhea ..	244	297	388
Rabies—Human cases ..	0	0	0
Positive animal heads ..	31	31	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR NOVEMBER 1956, AND
COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During November 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births.....	6615	4063	2552	24.6	25.7	27.9
Deaths.....	2333	1411	922	8.7	8.2	8.6
Fetal deaths.....	144	69	75	21.3	19.8	19.6
Infant deaths—						
under one month.....	137	72	65	20.7	21.3	23.2
under one year.....	234	106	128	35.4	31.1	33.9
Causes of Death						
Tuberculosis, 001-019.....	22	12	10	8.2	6.0	9.9
Syphilis, 020-029.....	6	1	5	2.2	2.6	2.3
Dysentery, 045-048.....	2		2	0.7	0.4	0.4
Diphtheria, 055.....	2		2	0.7	0.4	0.4
Whooping cough, 056.....	2		2	0.7	0.4	0.4
Meningococcal infections, 057.....	2	2		0.7		
Poliomyelitis, 080, 081.....						0.8
Measles, 085.....						0.4
Malignant neoplasms, 140-205.....	276	197	79	102.8	108.5	92.3
Diabetes mellitus, 260.....	31	19	12	11.6	9.8	9.5
Pellagra, 281.....	3	2	1	1.1		0.8
Vascular lesions of central nervous system, 330-334.....	315	187	128	117.4	110.0	101.4
Rheumatic fever, 400-402.....	3	1	2	1.1	0.7	2.7
Diseases of the heart, 410-443.....	729	482	247	271.6	258.7	296.9
Hypertension with heart disease, 440-443.....	133	57	76	49.6	53.3	61.1
Diseases of the arteries, 450-456.....	41	27	14	15.3	15.4	16.7
Influenza, 480-483.....	5	3	2	1.9	2.6	5.3
Pneumonia, all forms, 490-493.....	77	41	36	28.7	29.3	30.0
Bronchitis, 500-502.....	3	2	1	1.1	0.4	1.1
Appendicitis, 550-553.....	1		1	0.4	0.7	0.8
Intestinal obstruction and hernia, 560, 561, 570.....	13	10	3	4.8	6.4	8.4
Gastro-enteritis and colitis, under 2, 571.0, 764.....	19	2	17	7.1	2.2	2.7
Cirrhosis of liver, 581.....	11	8	3	4.1	3.7	8.0
Diseases of pregnancy and childbirth, 640-689.....	7	3	4	10.4	10.0	5.3
Congenital malformations, 750-759.....	29	21	8	4.4	4.4	2.5
Accidents, total, 800-962.....	217	134	83	80.9	65.0	60.7
Motor vehicle accidents, 810-835, 960.....	113	72	41	42.1	28.2	24.3
All other defined causes.....	422	220	202	157.2	151.0	168.7
Ill-defined and unknown causes, 780-793, 795.....	97	37	60	36.1	32.3	35.7

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

Psychiatrist Debunks Popular Ideas About Alcoholics—An Omaha psychiatrist has debunked some popular theories on how and what an individual must drink to be diagnosed as an alcoholic.

Writing in the March 2 Journal of the American Medical Association, Dr. Jackson A. Smith said some people think that a man who drinks a quart of whiskey a day but never drinks when alone, or one who routinely consumes 12 bottles of beer a day although never whiskey, isn't a "real" alcoholic.

The fact that a man never drinks alone, or drinks only beer, has nothing to do with the severity of alcoholism. Also, to be a chronic alcoholic, it is not necessary for a man to have delirium tremens or to become obviously intoxicated.

Neither can alcoholism be diagnosed by the clock. It is not necessary for an individual to start drinking in the morning, before lunch, or before 5 p. m. to be an alcoholic; although as the illness progresses, the hour at which the first drink is taken may be earlier in the day.

An alcoholic is any person "who relies on alcohol to meet the ordinary demands of living and continues to drink excessively after alcohol has caused him marital or occupational difficulty," Dr. Smith said. He is an alcoholic whether he drinks only in the evening, has never taken a drink when alone, or has not touched anything but beer for five years.

Dr. Smith made his comments in a special article on the psychiatric treatment of alcoholism, one of a series prepared by the committee on alcoholism of the A. M. A. Council on Mental Health to help general practitioners treat the disease. Dr. Smith is on the staff of the Nebraska Psychiatric Institute and the University of Nebraska College of Medicine.

In treating an alcoholic, the question is not only what or how the man drinks, but also why. Two problems must be met: the effects of the alcohol, and the underlying forces producing anxiety, which in turn causes the man to drink, Dr. Smith said. The majority of chronic alcoholics have an unusual amount of anxiety or tension that they attempt to control by drinking. This anxiety, which probably springs from an inability to express anger or resentment, is experienced as a feeling of fear, dread, or apprehension that may amount to panic.

Dr. Smith pointed out that physical effects of alcohol are more easily treated, and tend to be self-limiting if alcohol is withheld. However, unless the underlying problems are relieved, the drinking will be resumed as the anxiety recurs and increases in intensity.

Basically the aim of psychotherapy is an attempt to encourage the patient to express anger, and thus to prevent its accumulating and leading to increased tension, anxiety, and another drinking bout, Dr. Smith said.

The first step is for the patient to accept the diagnosis and the need for treatment—he cannot be "deceived into sobriety." For psychotherapy to be successful, the patient must personally conclude that for him drinking is impossible. . . . He must realize that there can be no compromise; he must be either a teetotaler or a drunk, Dr. Smith said.



BOOK REVIEWS

Fractures, Dislocations and Sprains. By John Albert Key, B. S., M. D., F. A. C. S., Clinical Professor Emeritus of Orthopaedic Surgery, Washington University School of Medicine; Associate Surgeon, Barnes, Children's and City Hospitals, St. Louis; and H. Earle Conwell, M. D., F. A. C. S., Associate Professor of Orthopaedic Surgery, University of Alabama School of Medicine; Associate Orthopaedic Surgeon, University Hospital, Birmingham, Ala. New sixth edition. Cloth. Price \$20.00. Pp. 1168, with 1123 illustrations. St. Louis, Mo.: The C. V. Mosby Co., 1956.

Doctor Earle Conwell is to be sincerely congratulated on his latest and comprehensive revision and edition of the now classic volume on *Fractures, Dislocations and Sprains*. In this sixth edition Doctor Conwell has extensively revised the chapters on Compound or Open Fractures and War Wounds, Injuries of the Spine, Injuries in the Region of the Hip, and Injuries in the Region of the Ankle. He has deleted those chapters devoted to Fractures of the Skull and Brain Trauma, and Fractures of the Jaw and Bones of the Face.

The composition and format of this book remain quite comprehensive, yet easily interpretable by both the experienced orthopedist and the general practitioner alike. The illustrations and print of the sixth edition are quite superior to those of the previous or fifth edition; and the amount of revision which has taken place since the publication of the fourth edition in 1946 has been so extensive as to render the fourth edition in many aspects now obsolete. In each edition the authors have succeeded in retaining the clarity and ease of understanding present since the first editions of this volume were published. The last revision is certainly no exception to the previous high standing of work maintained in this book. The illustrations and radiologic representations retain a sharp clarity which makes this book exceptional.

It can be strongly recommended as a reference handbook which should be in the hands of every general practitioner and general surgeon who is involved in fracture management. Certainly, everyone involved in the publication of this book is to be congratulated.

John Fletcher Comer, M. D.

Paper Electrophoresis. A CIBA Foundation Symposium. By G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch., and Elaine C. P. Millar, A. H. W. C., A. R. I. C. Published by Little, Brown and Company, Boston, Massachusetts. 220 pages. Price \$6.75.

This book consists of a series of papers relating the experiences of various experts in electrophoresis throughout the world. While it is not a

book for amateurs in the field, it certainly covers the daily problems encountered in paper electrophoresis, including the limits of accuracy and variation due to paper thickness, pH, etc.

The book contains general methods of paper electrophoresis, evaluation of albumin-globulin ratio of serum, analysis of human hemoglobins and the effect of ACTH and cortisone on the protein-bound serum polysaccharides. There is a rather brief discussion of physiochemical aspects of the design of the apparatus and, also, several papers on the influence of evaporation and diffusion on the separation of serum proteins. Also included are papers on the variability of protein-dye interactions, and a new approach to the staining of lipoproteins. The articles conclude with a general discussion of the whole field by various authorities and a short paper on high voltage paper electrophoresis.

To the reviewer the two most interesting articles are the discussion by Dr. E. L. Durrum on the future of the technique and its application to clinical research, along with the discussion of the application of this method to the differential diagnosis of canine diseases by J. deWael.

This book summarizes very nicely, in the articles listed above, the present aspect of paper electrophoresis and should find a place in the library of any individual doing this type of work. While there is only a very short index at the back of the book, it does cover very well the subjects discussed.

Thomas S. Hosty, Ph. D.

The Rochester Regional Hospital Council. By Leonard S. Rosenfeld, M. D., M. P. H., and Henry B. Makover, M. D. Cloth. Price, \$3.50. Pp. 204. Published for The Commonwealth Fund by Harvard University Press, Cambridge, Massachusetts, 1956.

The Rochester Regional Hospital Council was organized in 1956 to determine if small hospitals, which frequently lack specialized equipment and personnel, could, through voluntary participation in a regional plan, improve the quality of their services. The Council developed services which included continuing education of physicians and hospital personnel, advisory services in hospital organization and administration, improvement of hospital facilities, and certain joint and cooperative services.

This book is an account and evaluation of the Council's program by the Institute of Administrative Medicine of Columbia University School of Public Health. It covers all phases of the Council's activities. Included are suggestions for improving the Council's services.

Anyone who is concerned with the maintenance and improvement of hospital services should find the report interesting.

Martha Terry

Sleep. By Marie C. Stopes, D.Sc., London, Ph. D., Fellow of the Royal Society of Literature. Cloth. Price, \$3.00. Pp. 154. New York: Philosophical Library, Inc., 1956.

It may be true, as Dr. Stopes claims, that half the adults in the United States have difficulty in sleeping. It seems equally true that these poor sleepers will find scant help in Dr. Stopes' book.

Some of her theories as to the causes and cures of insomnia are novel, to say the least. For example, the person who has difficulty sleeping should check to see if his bed is placed in the east-west axis. If so, merely turning the bed to the north-south axis may cure the insomnia.

Why? Because you "magnetate" the north between the shoulder and the hips, and the east-west position prevents "magnetation."

Other causes of insomnia are sleeping on foam rubber mattresses (this insulates you from the earth's natural electricity), pajamas (gowns made of "real silk-worm silk" are the answer), or hot water bottles in bed (the chemical fumes keep one from sleeping).

Dr. Stopes suggests that sleep may be wooed by taking a warm drink to draw the blood from the brain! Or try placing a clock that ticks at a slower rate than your heart beat in the room. Or sleep in a room with an open, unused fireplace to insure better ventilation. The list is long and boring. This reviewer feels that the book itself is a better soporific than anything it recommends.

Martha Terry

AMERICAN MEDICAL ASSOCIATION NEWS

STANDARD NOMENCLATURE GIVES DOCTORS A COMMON LANGUAGE

You may think you have poison ivy and your doctor may even tell you that you do, but when he records his diagnosis, he will call it "dermatitis venenata."

What you call "athlete's foot" he'll call "dermatophytosis." And his secretary will simply file it as "112-211."

This may look like a method for confusing the patient and making a mystery of something simple, but it isn't. The patient isn't the only one who has been confused by terminology; so have the doctors. Calling athlete's foot "112-211" is one result of years of effort to give them a common language.

It's called the Standard Nomenclature of Diseases and Operations, which is published as a book by the American Medical Association. It is now used by more than 85 per cent of American hospitals, and has wide foreign distribution. It is also used in private physicians' offices, medical clinics, medical schools and libraries, and even for indexing medical motion pictures and literature.

In order to help people working with the system learn to code and to gain a better understanding of anatomy, the A. M. A. periodically sponsors regional nomenclature institutes. One was held March 11-13 at Hotel Roanoke, Roanoke, Va.

Others are scheduled for June 17-19 at

Indiana University Medical Center, Indianapolis, and August 5-7 in San Francisco. They are conducted by the editor of the book, Dr. Edward T. Thompson, U. S. Public Health Service, Washington, D. C., and Mrs. Adaline C. Hayden, Chicago, Certified Record Librarian and associate editor of the Nomenclature.

While the Nomenclature contains more than 16,000 medical terms, they're in good order and anyone with the key can tell quickly just what phlegmasia alba dolens (or 090-522.8) is. It's what may be called "milk leg" or "white leg." This may be colorful but it isn't very accurate.

The Standard Nomenclature is similar to the Dewey Decimal System used in almost all libraries. By a series of number it narrows a term down from a broad category to a specific part of the body, tells just what is wrong there and what caused it.

The numbers on the left side of the hyphen show where the disease is; those on the right show what caused it or what type of operation was or should be performed.

Thus athlete's foot or dermatophytosis is 112-211. Reading it as the numbers accumulate: 1 means diseases of the integumentary system; 11, the skin proper; 112, specifically the epidermis; -2 means diseases or infections due to fungus or animal parasites; -21, the hyphomycete group of fungi, and -211 the particular fungus, the *Trichophyton*. Taken all together they spell dermatophy-

tosis. By no means could this be mistaken for skin rash due to strawberries, or poison ivy. Poison ivy would be 110-3001. The 1 indicates it's a disease of the skin but from there on it separates itself from athlete's foot in no uncertain terms.

There's little margin for error. For instance, a doctor taking care of a patient who had moved from another town could look at the records and find that the patient once had suffered from a stomach ulcer. If the system is used properly, there's little chance he would confuse this with a duodenal ulcer, which is in a different place entirely.

Once upon a time, this could have happened. This was particularly true with diseases which were named after the men who discovered them. Sometimes there might be as many as six different diseases bearing—in one form or another—the same man's name. In fact, there might be two or more men with the same name for whom entirely different diseases were christened. To avoid this confusion the Standard Nomenclature has ruled out men's names. It names diseases by the site they affect and by what causes them.

With these revisions and with new diseases and operations constantly being reported, the Standard Nomenclature has to be kept current. In the 1952 edition, for instance, there were more than 5,800 changes. The book has been revised five times since it was first published in 1933.

One of the big jobs it has done is to cut down the number of terms the doctor must wade through for the right one. There are more than 2,000 terms that refer to tumors—many inaccurate or duplicating. Only 210 are preferred and that's all that appear in the Nomenclature itself. All others are listed in the index with a reference to the preferred term.

The words in the Nomenclature itself are the correct terms that are most acceptable to the majority of physicians as shown by surveys of the current medical writing. The editors work with 23 committees composed of recognized authorities in their fields. These committees are appointed by the editorial board, which is appointed by the A. M. A. Board of Trustees.

Members of the editorial board, which will serve until the next edition is published in 1960, are Selwyn D. Collins, Ph. D., Division of Public Health Methods, U. S. Pub-

lic Health Service, Washington; Dr. Edwin L. Crosby, director of the American Hospital Association, Chicago; Dr. Austin Smith, editor of the A. M. A. Journal, Chicago; Dr. Richard Plunkett, associate director, Joint Commission on Mental Illness and Health, Cambridge, Mass.; Dr. Thompson, and Mrs. Hayden. The chairman is Dr. George Baehr, Health Insurance Plan of Greater New York, who spearheaded the standardization movement in 1928.

As use of the book spreads, Mrs. Hayden receives more and more requests, now averaging about 400 a month. Many of them are from record librarians who don't think a doctor should use a term such as "black eye." He shouldn't. It's not in the book; neither is "bruise," which means about the same thing. He should say "contusion" and specify the site.

But if this sounds like hair splitting, the editors of the Standard Nomenclature do make allowances for a doctor's human side. One of the latest terms added to the index as a cause of death is simply "fright."

In the body of the book, death due to fright is properly termed "psychophysiologic cardiovascular reaction," meaning a general emotional and physical reaction of the heart and circulatory system.

But knowing that most doctors probably wouldn't think of it that way, the editors have put "fright" in the index with the notation, "See Psychophysiological disorders." It will probably remain until doctors are accustomed to thinking in the more technical term. Then it will be removed, as has "consumption," the old-fashioned term for tuberculosis.

VARICOSE LEG ULCERS TREATED WITH HUMAN PLACENTA

A new rapid method for treating varicose vein ulcers by using human placenta has been described by an Ohio physician.

Dr. Fred R. Denkwalter, department of surgery, Ohio State University College of Medicine, Columbus, said the treatment is similar to one devised for war wounds by a French army doctor.

He said in the American Medical Association's March Archives of Surgery that the method does not give a "permanent cure" to the problem of chronic leg ulcers. However, it does reduce the time and expense necessary for relieving the condition, while

giving the patient complete freedom of movement. The time necessary for healing of the ulcers is a matter of weeks instead of months as with older methods.

The placenta is the round, flat organ within the womb which establishes communication between mother and child by means of the umbilical cord. As soon after delivery as possible, one layer of the placenta is washed with a salt solution, cut into cubes, and stored in jars. It can be kept in an ordinary refrigerator for as long as three weeks.

The cubes are cut into the required shape and placed in the ulcer crater after it has been cleaned. The ulcer is then covered with gauze and an elastic bandage. The dressing must be changed at intervals.

Dr. Denkwalter used placenta to treat 22 varicose ulcers. Sixteen of these ulcers were obliterated during the first seven weeks of treatment, eight requiring four weeks or less for complete healing. In the others, a second application of placenta was necessary.

He explained that placental tissue "by its very nature is concerned with cellular growth" and it seems reasonable that the placental cells stimulate the growth of new cells in the ulcer crater.

The placental cells contain hormones, enzymes, vitamins, immune bodies, nutrients, and various other "chemical building blocks" which have a favorable effect on cellular growth. It is also possible, he said, that the placental material acts as a "lattice" through and around which healthy tissue may grow.

The placenta treatment for six leg ulcers from other causes, including hardening of the arteries and burns, was generally unsuccessful, he said.

SPECIAL TRAINING INCREASES HEARING AID'S VALUE

Just buying and wearing a hearing aid is not enough according to two Denver hearing specialists. A deaf person must make sure that it is properly fitted and that he learns how to use it correctly.

Writing in the March Archives of Otolaryngology, published by the American Medical Association, Dr. George L. Pattee and Lee A. Cary, M. A., said that training in the use of a properly-fitted hearing aid can

greatly increase its value. For instance, one patient with nerve deafness improved her discrimination ability from 58 per cent to 89 per cent with 20 hours of formal training.

However, many patients not only fail to receive proper instruction in the use of their aids, but they also don't even bother to make sure their aids fit properly. They frequently fail to follow their doctor's advice to go to their hearing aid dealer for corrections, and to return for retesting to see whether the changes resulted in improvement.

However, results of testing on identical twin sisters with similar hearing losses, environment, and training show "very vividly" the need for supervision in correct fitting and the advantages of auditory training, they said.

Five-year-old twin girls were fitted with hearing aids of different makes and then taught how to use them. Later testing indicated that one twin heard as well without her aid as she did with it. When she used her sister's aid she did much better. She was fitted with another aid and after six months of additional training she was making as good use of her hearing aid as was her twin sister.

MEDICAL SCHOOLS ALERT TO NATIONAL DEFENSE NEEDS

American medical colleges are alert to the needs of the populace in the event of a national emergency.

A recent report by the American Medical Association shows that 25 colleges of medicine have already become active in the program of Medical Education for National Defense.

The purpose of the program is to encourage the teaching of military and disaster medicine by regular faculty members of medical colleges. All emphasis is on medical rather than military topics, the report said, adding that "it is hoped that the problem of national preparedness in medical education can be solved by interested faculty members on a local basis and under local control."

In the past eight years, the proportion of the nation's total medical expenses met by voluntary health insurance has increased three times as fast as the proportion of Americans holding such insurance, Health Information Foundation also reports.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

May 1957

No. 11

PHYSICAL MEDICINE AND REHABILITATION AS A SERVICE TO SURGEONS

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New York City

The physical medicine and rehabilitation department of a hospital should be thought of as a service department. It should function in the hospital just as do the x-ray and laboratory services.

Two types of departments have been developed over the years: the first, known as the rehabilitation center, may be utilized by physicians for those more difficult patients who have a great deal of residual paralysis following an acute illness or trauma, and, the second, a physical medicine and rehabilitation service within a community hospital.

There is a need for both types of services. It is our firm belief that any community hospital should be able to handle at least ninety-five per cent of all its own local rehabilitation problems. Only the most difficult cases, such as a severe paraplegic or quadriplegic patient or a high bilateral above-the-knee amputee, ordinarily should need to go into a rehabilitation center.

A physical medicine and rehabilitation service may be headed by a physician trained in this specialty, who is called a physiatrist; the other disciplines concerned include physical therapy, occupational therapy, vocational counselling, social service, clinical psychologists and nurses trained

in rehabilitation. Speech and hearing problems should be handled by properly trained therapists in these fields. A community hospital may not have enough rehabilitation problems to support such a complete team on a full-time basis, but most communities have personnel trained in these disciplines who could be utilized on a part-time basis for those patients in need of their particular specialty. It is the duty of the expert in rehabilitation to make these available for your patients.

I would like to discuss first how a rehabilitation center operates and then, later, the community hospital rehabilitation program.

I would like to tell you about the Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center, which is fairly typical of other centers throughout the country. No patient can be admitted by self-reference. Only the patient's physician can refer the patient to the Rehabilitation Center. If the patient is deemed feasible for rehabilitation, the patient may be admitted as an in- or out-patient. The majority of patients coming to such a center have such tremendous physical problems that it is necessary for them to come in as an in-patient.

Every patient is given a complete history and physical examination, with laboratory tests and further x-rays as indicated. A complete consultant service representing all specialties is available. In addition to the routine history and physical examination, there are three tests which are important in rehabilitation: 1) a manual muscle test to see which muscles are weakened and how much; 2) range of motion test of all

Presented at the Ninth Annual Assembly of the Alabama Surgical Division of the International College of Surgeons, in conjunction with the Tuscaloosa County Medical Society, Tuscaloosa, Oct. 31, 1956.

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joints; and 3) and probably most important, is the "Activities of Daily Living" test. This last test is composed of some one hundred and two different activities which may be performed without thinking by the so-called normal person, but is impossible for the severely handicapped patient. The first is: "Can the patient move from place to place in bed?" This may be impossible for a paraplegic until he is taught the proper procedure. Testing will continue through the transfer activities, such as bed to wheelchair and back again, personal hygiene, wheelchair activities, dressing activities, ambulation, and climbing of stairs; and the last on the list, number one hundred and two, is, "Can the patient drive his own car?" Those activities which the patient can perform are filled in and spaces left blank for those activities he cannot perform.

The patient is now ready for the Evaluation Clinic where the entire staff and all the physicians are present. First, it must be decided as to whether the patient is feasible, and, if he is, a careful prescription is written which includes a complete physical and occupational therapy program, the activities of daily living, social service as necessary (many of these patients have family problems), psychological help for those who need it, and vocational counselling.

The patient is put on a full day's program, which runs from nine in the morning until four in the afternoon, and classes are changed every hour on the hour with one hour for lunch.

A case in point is J. S., who had had a severe fracture of the left humerus which had necessitated three operations. He had been casted several times and had been going to a physician's office for heat and massage three times a week for over two years. The man had been so accustomed to going to the physician's office that he was in the habit of entering through the back door, turning on the heat lamp for twenty minutes, and then calling the nurse for massage. His physician referred this man to the Institute and he was found to be perfectly normal except for his left upper extremity. He had good callus formation at the multiple fracture site, but he had a stiff elbow and wrist, and the fingers were carried in extension. He had marked atrophy of all the muscle groups of the upper left extremity. He was able to flex the fingers only a very few degrees.

The man was brought in as an in-patient and put on a complete program, and worked at the Institute from nine in the morning until four in the afternoon. At nine he had some heat put on the elbow, wrist and fingers of the left upper extremity. He got no massage. He was put on stretching to increase range of motion and muscle re-education for the muscles of the arm, forearm and fingers. At ten he went to occupational therapy where he had work to do which utilized the left upper extremity. At eleven he was brought back to the functional training room to work with the various modalities for his hand, wrist, elbow and shoulder. Twelve, luncheon, and, then at one, back to work again until four in the afternoon. He had to be seen by the psychologist because this man was convinced that he could never go back to work again. He had a wife, three children and twenty-eight dollars a week compensation. There were problems between this man and his wife and his children. The wife was called in by the social service worker to talk over these problems and she was told her husband would be going back to work before long. This man was seen by our vocational counsellor, and, with the physical progress he was making, the patient could be assured he would be able to return to his old job. And, at the end of forty-two days at the Institute, this patient was discharged, and, as the patient himself said as he left, "Doctor, look, my elbow and wrist work again, and I can clench my fingers. I don't have my full strength back yet, but I work harder here than I do at the job and there I get paid for it!" I am convinced this man would never have gotten back to work without a complete rehabilitation program.

A rehabilitation center may well include, also, a back service, amputee service, and, as mentioned above, a complete speech and hearing department. After the patient has been rehabilitated as far as he possibly can go, he is returned to his physician with recommendations as to what we think might be necessary to keep him at his peak.

The rehabilitation program in a community hospital may be composed of only one physician and a physical therapist, and, perhaps, an occupational therapist, but a progressive physician will investigate the resources of his community and find the other paramedical disciplines mentioned above to be utilized on a part-time basis for

his patients as necessary.

Now, let us take a few types of cases that would be benefited by a rehabilitation program in a community hospital. In the last five years, we find that it becomes increasingly rare that a good clean lower level paraplegic patient is referred to the Institute. This is as it should be, and I know, in my visits throughout the country, that the rehabilitation departments of community hospitals are training these people in the use of their braces and in self-sufficiency.

Amputee patients can be benefited by a complete rehabilitation program. We have found the use of the team approach has been most successful. The surgeon who performed the amputation, the physiatrist, the physical therapist trained in gait training, and the limb manufacturer—the prosthetist—are all invaluable members of the team and should be utilized to their fullest extent. We have found that by pulling these disciplines together at the time the patient is ready to be fitted with a limb, after he has had his preprosthetic training, provides the patient with a better prosthesis, one that he can use to the fullest extent, and that the demands for revision and service will be less.

Preprosthetic training includes the prevention of contractures around the hip. As you know, many of these patients develop abduction and flexion contractures from sitting too long. Postoperatively, many times, elevation of the stump is desirable. It is much better to put the patient in the prone position and elevate the leg in hyperextension. As you know, the flexor muscles are much stronger than the extensors of the hip. If the patient is allowed to remain in the supine position for two weeks, with elevation of the leg in flexion, it will take an additional two weeks to get rid of the flexion contracture. Preprosthetic exercises for your amputee patient should include muscle strengthening exercises for all muscles around both hips, and particularly the extensors; also standing balance on the good leg in the parallel bars and eventually training the patient in the use of crutches before the prosthesis is delivered. One test that I often use in trying to decide whether an amputee patient should be given an artificial leg is to have him ambulate with crutches, and, if he is able to do a good swing-thru gait and he is able to talk to me as I walk alongside of him, I know this pa-

tient has enough neuromuscular coordination to wear an artificial leg properly.

The prescription of the leg is carefully written in the presence of all members of the team, with particular attention as to the vascular supply and muscles of the remaining leg, the age of the patient, and his vocation and avocation. It is important that the patient be given proper training in the use of his prosthesis after he has been fitted with the device.

Patients with fractures can be helped by utilization of physical medicine and rehabilitation. Again, the department should be utilized as a service department to help keep up the strength of the muscles of other extremities, and also in helping the affected extremity to return to normal after callus formation.

Patients with cerebral palsy are often in need of intensive rehabilitation after certain surgical procedures, such as tenotomy for relief of spasticity and bone fusion. Again, the program should be worked out carefully with the surgeon and the rehabilitation department.

We have found that many cerebral palsied children and adults can be benefited and made more self-sufficient by such a team approach.

As you know, Dr. Irving S. Cooper of New York University has developed a new operation for patients with Parkinsonism with which he has had outstanding success in patients below fifty years of age. This is a chemopallidectomy, in which alcohol is injected into the base of the brain with instant relief of the typical spasms in many cases. Postoperatively these patients need rehabilitation to help them recover the coordination they have lost during their years of Parkinsonism. We have seen some dramatic results in patients who have been in bed for years, needing nurses around the clock, who are now able to travel, dress themselves, and feed themselves following this operation. Dr. Cooper has begun to work with certain types of cerebral palsied children and the results are encouraging to date.

Other types of cases that we have found to be benefited by the team approach are patients with peripheral nerve injuries, and, of course, patients afflicted with poliomyelitis.

In summary, there are two types of services in physical medicine and rehabilitation: 1) the rehabilitation center and 2) the rehabilitation department within a community hospital, which should handle the majority of problems in that community. The team approach, utilizing the services

of the surgeon, physiatrist, physical therapist, occupational therapist, vocational counsellor, psychologist, nurse, social service, and speech and hearing therapists, is necessary if we are to care adequately for the needs of these severely handicapped people.

ULTRASONIC: ADJUNCTIVE THERAPY FOR CARDIAC PAIN

A PRELIMINARY REPORT

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That the modern treatment of angina pectoris is far from satisfactory is attested to by the multitude of medicines and surgical procedures that have been proposed for it. The one drug universally accepted as being beneficial is nitroglycerin. But there comes a time in the evolution of the disease condition when nitroglycerin ceases to be effective enough to give the patient adequate relief. At this point, protracted bed rest and/or narcotics are usually employed, with varying degrees of success. During the past year we have treated seven such patients on an ambulatory basis with ultrasound therapy.

APPARATUS AND TECHNIC

The instrument used in giving these treatments employs a precision quartz crystal, having an area of 12.5 square centimeters, vibrating at a frequency of 1000 KC per second, and at an energy output of 1.5 watts per square centimeter.

Figure 1 illustrates the method of performing the treatment. The patient sits upright in a chair with his thorax freely movable, so that in the event of the slightest pain he may pull away from the sound head.

The areas to be sonated are marked by the physician, and the treatment is given by a technician. The areas to be sonated are from C-5 through T-5 spinal segments, about one and one-half inches lateral to the spinous processes of the vertebrae, and on a line parallel to the vertebral column. Mineral oil is used as a coupling agent. These areas are sonated for from four to six minutes each, and if the anginal pain extends

down either arm, the brachial plexus is sonated as in figure 2 in the superior and inferior clavicular trigones. These areas are sonated for from 1 to 2 minutes each. Treatment is administered daily until relief is obtained; then three times a week for two to three weeks; then weekly for about one month. After that, treatment is given if pain recurs.

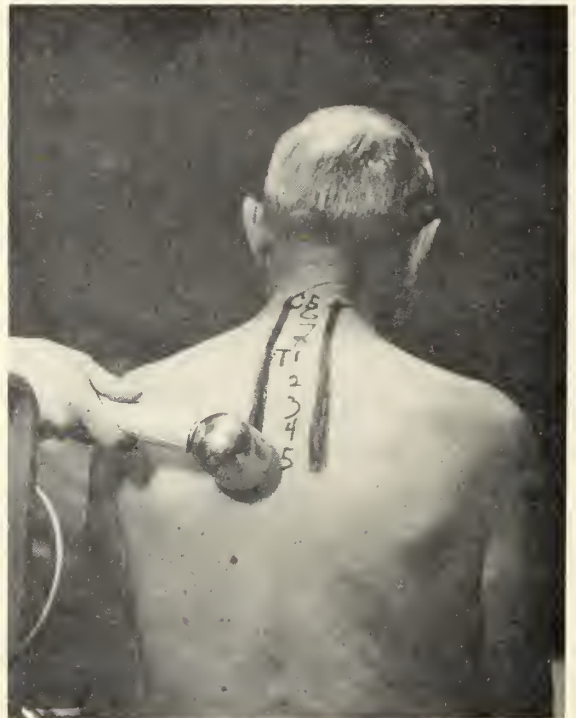


Fig. 1. Method of sonating dorsal roots.

Note that patient's thorax is freely movable, so he can move away by reflex if pain is elicited.

Ultrasonic therapy has been used in physical medicine for several years, and while its

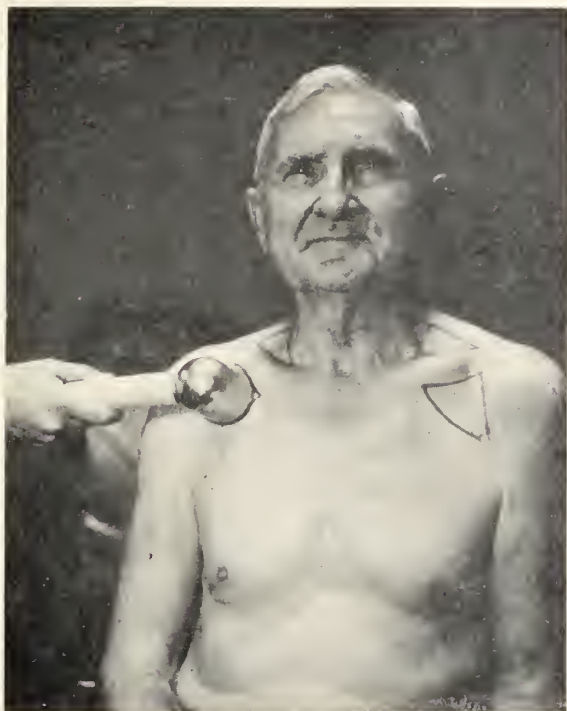


Fig. 2. Method of sonating brachial plexus.
A rubber balloon filled with water may be used as coupling agent here, but we prefer mineral oil and movement of sound head.

physiologic action is not well understood, some features have been clarified. The rationale for using ultrasound waves in the present study depends upon the selective

action of the ultrasound waves on nerve tissue. This effect on nerve fibers is not well understood, except that it does decrease the transmission of painful impulses. The effect on nerve fibers may be destructive, but it was felt in treating these patients that maintaining the integrity of the nerve fiber transmitting the anginal pain was a minor consideration as compared to the possible benefit from interrupting these painful sensations.

CHOICE OF PATIENTS

Patients were selected for this study on the following basis: 1. clearly demonstrated heart disease, 2. typical anginal pain, 3. no other demonstrable condition that could be causing the pain, 4. two to seven years previous observation of these patients, and 5. previous therapy with nitroglycerin as sublingual tablets 1/100 gr. (and nitroglycerin ointment) with some benefit for a fairly long period, followed by loss of effectiveness of this medication.

The patients who had been in failure had been digitalized for a long time before this study was begun. The medical regimen had been frozen for at least two weeks before ultrasound therapy was begun.

Figure 3 shows the changes in the cardinal features of the disease brought about by the treatment of these patients.

Pa- tient Num- ber	Nocturnal Attacks		Mild Exertion		Moderate Exertion		Cold		Emotional Stress		Unknown Causes	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
1	2-5	0	+	0	+	+	+	Could Stand More	+	0	+	0
2	1-5	0	+	0	+	+	+	+	+	0	+	0
3	1-3	0	+	0	+	0	+	0	+	0	+	0
4	3-5	0	+	0	+	0	+	0	+	0	+	0
5	1-2	0	+	0	+	0	+	0	+	0	+	0
6	5-10	0	+	0	+	+	+	0	+	0	+	0
7	1-3	0	+	0	+	0	+	+	+	0	+	0

Fig. 3. Relative incidence of attacks before and after course of ultrasonic therapy.
Patients are listed in the first vertical column. Across the top line are listed the factors precipitating their attacks.

The following case synopses are typical:

Case 1: A 68 year old, white, married carpenter, who had been under our care since August 1949 for angina pectoris, which at first was mild and only on severe exertion. By February 1954 the anginal attacks had become more frequent and more severe: "An aching right back of my breast bone and extending up into my left shoulder." There were no other complaints and physical examination was negative. B. P. was 202/114.

He was begun on quinidine, pentaerythritol tetranitrate, and sublingual nitroglycerin, with marked relief from attacks. Later, he was digitalized because of peripheral edema and dyspnea. In April 1954 reserpine 0.25 mg. b.i.d. was added, and later hydralazine hydrochloride 25 mg. q.i.d. was added.

On 1/1/55 the patient had a severe posterior myocardial infarction, shown by typical history, laboratory findings, ECG changes and hospital course. He was hospitalized for two weeks. Then he spent four weeks in bed at home, and slow ambulation was begun. He had been free from pain while confined to bed, but the anginal pain returned upon ambulation and became progressively more frequent and more severe as activity increased.

By August 1955 the pain was almost constantly present, even on the above medication and when at rest. He was put on propyl thiouracil with no relief. Aminophylline gave no improvement. Nitroglycerin ointment massaged into the chest wall improved his situation slightly. We had given him every possible assurance and all the psychotherapy we could muster. He was critically and painfully ill.

On 11/9/55 he was begun on a course of ultrasonic therapy, as described above, daily until 11/29/55. On this date the patient stated that he had had no attacks since the fifth treatment. Ultrasonic therapy was discontinued and the patient got along well on his cardiac regimen for eleven months. On 10/22/56 angina of effort returned and he was resonated with the same beneficial results. He stated that he was completely free from the severe retrosternal "aching, pressing pain" that was "getting my living." There remained a little precordial burning sensation which had been there all the time and became slightly worse

on exertion and exposure to cold. The patient's outlook became much brighter and more hopeful. He had slept well since his first course of ultrasonic a year ago and had gained four pounds without any apparent edema. Heart rate, blood pressure and ECG were unchanged.

OBSERVATIONS

Every patient benefited by 1. getting more sleep, with a cessation of the nocturnal anginal attacks, 2. increase of tolerance for exercise, 3. increase of tolerance for cold, 4. decrease in the number of attacks of anginal pain while awake, 5. decrease in severity of attacks after receiving a course of ultrasound treatments, and 6. markedly decreased nitroglycerin consumption. The usual decrease was from a pre-treatment level of twelve to twenty 1/100 gr. tablets per day to three or four per day after treatment.

While figure 3 speaks clearly for itself, certain aspects of the other patients should be discussed:

Case 2: This patient had had typical angina for years. He had three definite myocardial infarctions in two years (1955 and 1956) followed by severe myocardial insufficiency so that he was taking two 1/100 gr. nitroglycerin tablets at about hourly intervals all day and night, massaging about 1½ inches of nitroglycerin ointment onto his chest q.i.d and "in bed all the time." He was completely relieved by ultrasonic, but the pains recurred when the treatment was cut to once a week. After four treatments of six minutes each he was again almost asymptomatic.

Case 3: This patient (No. 6) felt that he was completely cured, discontinued his nitroglycerin and other medications, left the state and died a few weeks later, tragically illustrating that the patients who receive this treatment must be kept under observation and treatment. It is to be emphasized that this treatment does not replace nitroglycerin or rest and other measures that have been employed before ultrasonic treatment.

CONCLUSIONS

Seven cardiac patients with severe angina were treated by sonating their lower cervical and upper thoracic nerve roots.

Our case studies have demonstrated the effectiveness of ultrasound therapy in re-

lieving the pain of refractory angina pectoris. We do not know the exact mechanism of this phenomenon. Perhaps it acts only on the dorsal nerve roots to relieve pain. Perhaps it works on the thoracic sympathetic nerve trunk and in this manner achieves dilatation of the coronary blood vessels. We hope that answers to these questions will be forthcoming, but even in the light of our present knowledge of the subject, we feel that ultrasound therapy is a powerful adjunct to the treatment of angina pectoris.

This method of treatment is totally painless to the patient and there are very few contraindications. No harmful results were noted. Apology is not made for the small number of patients included in this series. If we had waited for one hundred

cases, it might have taken ten years. Much suffering may be alleviated in that space of time. We feel that any method of treatment so simple and so safe and which gives 100 per cent good results in such a pronounced and unequivocal manner should be presented to the profession as promptly as possible.

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THE BLOOD-BRAIN BARRIER IN NEUROPSYCHIATRIC DISORDERS

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INTRODUCTION

For several decades investigators have hoped to find physical and chemical explanations of mental illness. It is known that various chemicals reach the brain from the blood by two main routes. They may pass through the walls of the blood vessels and meninges in and around the brain, or they may reach the brain indirectly by first passing through the choroid plexus into the cerebrospinal fluid. Different substances vary considerably in their ability to pass from the blood stream into the cerebrospinal fluid. For example, glucose is present in higher concentration in the blood, but chlorides are more concentrated in the spinal fluid. Wallace and Brodie¹² mention the capillaries of the brain and the choroid plexus do not allow free diffusion of chemicals from the blood into the brain. These vessels have a selective permeability, and equilibrium when established is between cerebral extracellular fluid and cerebrospinal fluid. Bakay² lists various chemicals such as bile salts, cobra venom, 15 per cent ethyl alcohol, and neoarsphenamine, which break down the blood-brain barrier. Taylor, Smith and Hunter¹¹ found the blood-brain

barrier to bromides was almost abolished in acute tuberculous meningitis. This suggests the possibility that the blood-brain barrier may be affected by various neuropsychiatric disorders.

PURPOSE

The purpose of this study is to determine if there are any characteristic changes in the blood-brain barrier for bromides, chlorides, glucose and protein in psychoneurotics, schizophrenics, cases of central nervous system syphilis, and other neuropsychiatric disorders.

METHOD

Thirty-six veterans representing seven different diagnostic categories were chosen for this study. Five of these hospitalized veterans had anxiety reactions, twelve had schizophrenic reactions, four had psychoses of undetermined cause, two had chronic brain syndromes associated with arteriosclerosis, two had chronic brain syndromes associated with trauma, ten had central nervous system syphilis, and one was a personality disorder. Each of these men received sodium bromide in one-gram doses three times a day for three days. Then the

medication was stopped for two days. The following morning, approximately 60 hours after the last dose of bromide, blood samples and spinal fluid were obtained. This is the method described by Taylor, Smith, and Hunter.

RESULTS

The following four tables give the results of quantitative tests in each of the diagnostic categories. For ease in comparison, the mean value was determined, and the ratio of the amount in the blood to the amount in the spinal fluid was calculated. It is evident that, if there is no blood-brain barrier for a particular substance, the ratio will be equal to one.

TABLE I			
Diagnosis	Mean Blood Bromide	Mean CSF Bromide	Mean Bromide Ratio
Anxiety Reaction	41 mg. %	14 mg. %	2.93
Schizophrenic R.	44 mg. %	14.6 mg. %	3.02
Psychosis ? Cause	38 mg. %	10 mg. %	3.80
CBS Arteriosclerosis	63 mg. %	20 mg. %	3.15
CBS Trauma	35 mg. %	10 mg. %	3.50
CBS Syphilis	40.4 mg. %	9.9 mg. %	4.08

TABLE II			
Diagnosis	Mean Blood Chloride	Mean CSF Chloride	Mean Cl Ratio
Anxiety Reaction	614 mg. %	729 mg. %	0.84
Schizophrenic R.	601 mg. %	729.3 mg. %	0.825
Psychosis ? Cause	587 mg. %	700 mg. %	0.84
CBS	608 mg. %	752 mg. %	0.81

TABLE III			
Diagnosis	Mean Blood Glucose	Mean CSF Glucose	Mean Glucose Ratio
Anxiety Reaction	110 mg. %	67 mg. %	1.64
Schizophrenic R.	108 mg. %	60 mg. %	1.80
Psychosis ? Cause	109 mg. %	60 mg. %	1.82
CBS	124 mg. %	61 mg. %	2.04
CBS Syphilis	116 mg. %	64 mg. %	1.81

TABLE IV			
Diagnosis	Mean Serum Protein	Mean CSF Protein	Mean Protein Ratio
Anxiety Reaction	7150 mg. %	30 mg. %	238
Schizophrenic R.	6910 mg. %	26 mg. %	266
Psychosis ? Cause	7180 mg. %	23 mg. %	312
CBS Arteriosclerosis	6990 mg. %	53 mg. %	132
CBS Trauma	6970 mg. %	29 mg. %	240
CBS Syphilis	6945 mg. %	34 mg. %	204

DISCUSSION

Patrick and Eadie⁸ state that in 1925 F. K. Walter studied the bromide ratio in 15 normal individuals and found it to vary from 2.9 to 3.3. In certain mental diseases he found higher ratios and postulated this indicated decreased permeability in the blood-brain barrier. In the present study the bromide ratio in four anxiety cases was found to vary only from 2.8 to 3.0. The fifth case of anxiety was complicated by a positive serology and arrested pulmonary tuberculosis. The bromide ratio in that fifth case was 3.6. The values of 2.8 to 3.0 for anxiety cases compare well with the findings of Rowland and Randt⁹ for hysteria (2.75 to 3.0).

In twelve cases of schizophrenic reaction the bromide ratio varied from 2.3 to 3.4. This agrees with the bromide ratio of 2.2 to 3.39 found by Taylor, Smith, and Hunter¹¹ in psychotics. In the present study four unclassified psychoses had bromide ratios varying from 3.0 to 5.0. Two of these psychoses had ratios (3.0 and 3.4) which fall within the range for schizophrenics. One unclassified psychosis had a strongly positive blood serology and indications of organicity on psychologic tests. His bromide ratio was 5.0. The other case of psychosis had mental deficiency. His bromide ratio was 3.6.

Two older veterans had chronic brain syndrome with psychosis associated with cerebral arteriosclerosis. Their bromide ratios were 3.0 and 3.1. These values were checked by administering sodium bromide for 5 days prior to second examination of spinal fluid and blood. However, the ratios remained identical in both cases. Two cases of psychosis associated with brain trauma gave ratios of 3.1 and 5.0. The patient with the 3.1 ratio had brain trauma more than 10 years ago. The patient with a 5.0 ratio had severe brain trauma within the past two years.

Ten cases of central nervous system syphilis gave bromide ratios varying from 3.4 to 4.8. These values are significantly higher than in other neuropsychiatric cases in this study with four exceptions that have already been mentioned. This higher bromide ratio for the luetics was not due to a higher blood bromide level but to a low spinal fluid bromide. These findings would support Walter's contention that certain mental diseases decrease the permeability of the blood-brain barrier to bromides.

Robert H. F. Smith¹⁰ studied 9 patients with central nervous system syphilis as indicated by gold curve, Kahn, cell count and spinal fluid protein. He found the bromide ratio was between 2.0 and 2.8. This apparent disagreement with our findings may be due to the fact that in the present study patients with central nervous system syphilis had been adequately treated years ago and had been free of infection for some time with spinal fluid gold curves approaching normal. In other infections the bromide ratio varies with the stage of the infection. Taylor, Smith, and Hunter found the bromide ratio in tuberculosis without meningitis 2.0 to 3.0. With acute tuberculous

meningitis it was 0.7 to 1.6. When patients with tuberculous meningitis improved, the ratio increased to 1.6 to 2.5. In non-tuberculous meningitis the ratio was 1.6 to 3.1.

It would seem that anxiety reactions and schizophrenic reactions do not affect the blood-brain barrier for bromides. If all patients with positive blood and/or the diagnosis of central nervous system syphilis are excluded 87.5% of the remaining 24 patients have bromide ratios between 2.7 and 3.4. This is slightly wider range than 2.9 to 3.3 which Walter found in 15 normal individuals.

Chloride determinations revealed 20 patients have chloride ratios between 0.80 and 0.85 with little variation between different diagnostic categories. Glucose results indicate anxiety reactions tend to have a lower glucose ratio due to a higher spinal fluid glucose. This suggests that in anxiety reactions there is some increase in the permeability of the blood-brain barrier to glucose. Chronic brain syndromes tend to have a higher glucose ratio due to a higher blood glucose.

Blood and spinal fluid protein determinations reveal serum proteins and spinal fluid proteins tend to be relatively low in schizophrenic reactions. Authorities⁷ recognize mental disturbances, such as confusion, delirium, abnormalities in behavior, and apathy, occur in hepatic cirrhosis and viral hepatitis. Fisk, Chanutin, and Klingman⁵ state the impairment in the production of plasma proteins, particularly in patients with psychoses uncomplicated by other disorders, undoubtedly reflects a metabolic or endocrine disorder. It may be postulated that the organic defect in schizophrenia is an inability of the liver to manufacture normal serum protein. Instead, an abnormal globulin is produced. Heath⁶ has reported that even minute quantities of globulin from schizophrenic patients, when administered intravenously, produce transient psychotic reactions in normal individuals.

Bakay states the cerebral capillaries are lined with an adsorbed layer of blood proteins which penetrates the interstices of the intercellular cement and regulates the passage of substances out of the blood stream. The blood-brain barrier may be based on a local peculiarity of the interendothelial cement. This is related to the normalcy of the adsorbed blood proteins. Therefore the ab-

normal globulin in schizophrenics may produce psychotic reactions by changing the permeability of the cerebral capillaries, and the globulin need not pass outside the capillaries.

In central nervous system syphilis and in chronic brain syndromes associated with cerebral arteriosclerosis, the protein ratio tends to be low due to the high spinal fluid protein values. Aird, Strait, Zeale, and Hrenoff¹ found an increase in the concentration of cocaine in the cerebral cortex of cats after concussion. This was interpreted as being due to increased permeability of the blood-brain barrier associated with the concussion. Bassett, Rogers, Cherry and Gruzhit³ found the blood-brain barrier breaks down when Diodrast or hypertonic glucose is injected intravenously in high concentrations. The resultant increase in spinal fluid protein was felt to be due to alteration of the endothelial capillary membrane. Bering⁴ feels the choroid plexus is not as important in the exchange of ions as are the walls of the ventricles and the perivascular spaces of the brain.

The increased spinal fluid protein in the present study, noted in chronic brain syndromes, including central nervous system syphilis, may indicate increased permeability of the blood-brain barrier to proteins. The possibility of this increase in spinal fluid proteins being due to catabolism associated with trauma, infection, or aging must be considered. However, only 2 of the 14 chronic brain syndromes had increased spinal fluid globulin. These two cases had cerebral arteriosclerosis.

SUMMARY

1. Quantitative determinations of bromides, chloride, glucose and protein were made simultaneously on the blood and cerebrospinal fluid of 36 neuropsychiatric cases.
2. Ten patients with central nervous system syphilis showed decreased permeability of the blood-brain barrier to bromide but apparently increased permeability to protein.
3. Five patients with anxiety reactions showed slight increase in the permeability of the blood-brain barrier to glucose.
4. In none of the diagnostic categories was any significant change noted in the permeability of the blood-brain barrier to chlorides.

5. Serum proteins and spinal fluid proteins in twelve schizophrenic patients were lower than in other neuropsychiatric categories. A metabolic defect is postulated.

6. Patients with cerebral arteriosclerosis had increased spinal fluid globulin and high spinal fluid proteins.

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All diabetics should have annual chest x-rays. Any sudden increase in insulin requirements or loss of weight, even though it appears voluntary, should be followed by a roentgenographic examination of the chest. By earlier diagnosis the prognosis of tuberculosis in the diabetic will be immeasurably improved. Treatment of both diseases must be aggressive.—Robert H. Joelson, M. D., and Henry Dolger, M. D., *J. of Mt. Sinai Hosp. of N. Y.*, July-Aug. 1956.

Tube Used to Prevent Collapse of Lung—A "dead-space rebreathing tube" has been called a simple, inexpensive, and effective method for preventing and treating atelectasis, or collapse of the lung.

Three Rochester, New York, researchers said in the April 6 *Journal of the American Medical Association* that atelectasis is a common and often dangerous complication occurring after surgery or in situations such as pneumonia, in which secretions collect in the lungs and prevent them from getting enough oxygen.

Frequent coughing or turning by the patient helps somewhat, but breathing carbon dioxide is the best method for combating this complication.

The authors said breathing through a rubber tube, which is placed in the patient's mouth while his nose is held shut, is more effective than the standard method of breathing into a paper bag and less expensive and simpler than breathing pure carbon dioxide through a face mask. They have used the tube without difficulty for 1,000 patients at the Strong Memorial and Rochester Municipal Hospitals, Rochester.

Here's how the dead-space rebreathing tube works:

When the breath is exhaled, some air still remains in the lungs in what is called "dead space." Of course, the air is changed as fresh air enters from the outside and carbon dioxide is given off.

However, if the tubes leading to the alveoli—the tiny air sacs from which oxygen enters the blood stream—become clogged with secretions, there is no way for the oxygen to enter the sacs and no way for the carbon dioxide to leave. So the alveoli shrink, or collapse, and the carbon dioxide accumulates in the blood.

This accumulation of carbon dioxide in the blood stimulates the nervous system to increase the breathing rate. Rapid breathing helps clear out the secretions and keeps fresh air moving into the alveoli.

However, during illness the body cannot always do this alone. That's where the dead-space tube enters.

Actually it serves as an extension to the lungs. Because not all the air can be drawn from the other end of the tube, a dead space occurs in the middle of it. The patient "rebreathes" his own carbon dioxide as it accumulates in the tube's dead space. This raises the blood carbon dioxide level and stimulates the breathing rate, which in turn helps unlog the lungs.

The tube is used once every two hours for five minutes. This is sufficient, the authors said, to keep the lungs unclogged and expanded.

The authors are Dr. Seymour I. Schwartz, Dr. W. Andrew Dale, and Hermann Rahn, Ph. D., of the departments of surgery and physiology at the University of Rochester School of Medicine and Dentistry.

THE CLINICAL USE OF ADRENOCORTICAL STEROIDS IN COLLAGEN DISEASES

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The concept of collagen diseases was introduced in 1942 by Klemperer,¹⁻⁷ and the "collagen diseases" are generally considered today to include "the rheumatic maladies, hypersensitivity angitis, systemic lupus erythematosus, generalized scleroderma, and, possibly, dermatomyositis."^{2, 3} These six diseases have in common, as Klemperer stated, "all we wanted to express originally . . . that in certain diseases anatomical investigations reveal conspicuous alterations of the intermediary substances of the connective tissue in a systemic manner."

Connective tissue may be defined as a variable complex of extracellular substances containing a variety of mesenchymal cells and should include vitreous humor, synovial fluid, and intercellular cement.⁸ The most common mesenchymal cell is the fibroblast which is most probably involved in the synthesis and maintenance of the extracellular substance. Also there are fixed and mobile macrophages and mast cells. There are three types of fibers in connective tissue, collagen, elastic, and reticulin fibers. Collagen is a fibrous protein with a characteristic wide angle x-ray diffraction pattern. Reticulin is somewhat more contro-

versial but is universally accepted to be of a thin, blanching, fibrous nature with argyrophilia. Elastic fibers, present in most connective tissue, exhibit long range rubber-like extensibility, have great tensile strength, are heat resistant, and are insoluble in most solvents. Ground substance is an extracellular, extrafibrillar, amorphous matrix which varies in content from tissue to tissue and is usually in a gel state, though it is liquid as synovial fluid. Acid mucopolysaccharide, containing hyaluronic acid and chondroitin sulfate, is its most characteristic component.

Pathologically the collagen diseases have, in common, certain features which are found chiefly in the intercellular substance.⁹ There is edema, characterized by an amorphous, jellylike, stainable matrix consisting of mucopolysaccharide, water, and other components. Fibrinoid necrosis, or areas of deeply eosinophilic homogenous material, is characteristic. Cellular infiltration of fixed and mobile phagocytes, lymphocytes, polymorphonuclear neutrophils, and, to a lesser extent, of monocytes, eosinophils, and plasma cells is seen in areas of damage. There is vascular proliferation in the areas of damage and the lumens may become thickened, obstructed, or necrotic. Finally, a fibroblastic proliferation is seen.

There are numerous steroids produced naturally by the adrenal cortex classified as mineralo-, gluco-, and nitrogen retaining steroids, but this paper will be confined to the discussion of glucocorticoids. These are 17-hydroxycorticosterone (the principal adrenocortical secretion), cortisone, ACTH (which acts through the adrenal cortex) and the synthetic analogues of compounds E and F, prednisone and prednisolone. The principal biologic properties of these substances are:

1. Effective anti-inflammatory and antiphlogistic activity demonstrated in humans and animals. Antiphlogistic is well defined as the property of adrenocortical hormones to moderate the inflammatory re-

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The author is a student in the Medical College of Alabama. The paper was entered in the 1956 Schering Award Contest.

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3. Klemperer, P.: The pathogenesis of lupus erythematosus and allied conditions, *Ann. Int. Med.* 28: 1, 1948.

4. Cecil and Loeb: *Textbook of Medicine*, 9th ed. Philadelphia, W. B. Saunders Co., 1955.

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6. Robb-Smith, A. H. T.: The concept of the collagen diseases, *Practitioner* 173: 117-124 (Aug.) 1954.

7. Banks, B. M.: Is there a common denominator in scleroderma, dermatomyositis, disseminated lupus erythematosus, Libman-Sacks syndrome, and periarteritis nodosa? *New England J. Med.* 225: 433 (Sept. 18) 1941.

8. Gross, Jerome: Evaluation of structural and chemical changes in connective tissue, *Ann. New York Acad. Sc.* 56: 674 (July 17) 1953.

sponse regardless of the nature of the inflammatory stimulus.¹⁰

2. Interference with carbohydrate metabolism with increased gluconeogenesis and often a negative nitrogen balance.

3. Control of sodium and potassium metabolism causing increased sodium retention and diuresis of potassium.

4. Ability to suppress elaboration of 17-hydroxycorticoids by the adrenal cortex following the intravenous administration of ACTH.

Hydrocortisone on a milligram basis has slightly more potent antiphlogistic properties than cortisone and has strong gluconeogenic activity but mild electrolytic effects. Cortisone has moderate gluconeogenic and electrolytic effects.¹¹ ACTH produces all these effects through the adrenal cortex, but the gluconeogenic effect predominates. Prednisone and prednisolone have antiphlogistic effects approximately 3 to 5 times those of cortisone and hydrocortisone, and have a significantly lower potential for sodium and water retention and potassium diuresis. There are no data available to indicate that the anti-inflammatory and antiphlogistic actions of prednisone and prednisolone differ qualitatively from those of cortisone.¹²

MECHANISMS OF ACTION

All therapy should be, if at all possible, placed on a rational and scientific basis. At present the treatment of collagen diseases is largely based on empiricism. However, intensive studies are being carried out to elucidate the mechanisms of adrenocortical steroids in the treatment of collagen diseases.

It seems clear that these hormones inhibit inflammation primarily by suppressing progressive cellular damage and thus interrupting the chain reaction which follows an inflammatory stimulus. There is experimental evidence that progressive

fibroblastic damage in an area of inflammation is inhibited by administration of these hormones.^{10, 13} All the elements of granulation tissue seem to be profoundly affected by cortisone.¹⁴ Granulation tissue forming in the vicinity of wounds is markedly inhibited, this inhibition becoming apparent in the first stages of inflammation and cannot be observed if administered after granulation tissue has formed. The fibroblast appears smaller, flatter, and the nuclei are more pycnotic. The number is greatly decreased. Surrounding the injury, areas can be seen where fibroblasts and granulation tissue as a whole are absent. As the fibroblast is considered the source of mucopolysaccharide and fibers of ground substance, either directly or indirectly, this is of great importance. The effect of cortisone upon collagen fibers is a profound one and concerns their growth, cohesion, and formation.¹⁴ As cortisone inhibits growth in general, so is the longitudinal growth of collagen fibers inhibited, but width is not decreased. Taubenhau¹⁴ concludes that, whatever the effects of cortisone upon the body as a whole, the site of action upon granulation tissue and connective tissue in general is a local one. The true mechanism of cortisone inhibition of granulation tissue is unknown, though many mechanisms have been proposed.¹⁴⁻¹⁷ This is a most interesting field of research, but space does not allow further discussion of this.

DOSAGE AND SIDE EFFECTS

Dosage will only be discussed in general as this paper is primarily concerned with the rationale for the use of these steroids in collagen diseases. There are numerous ex-

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12. Demartini, Felix; Boots, R. H.; Snyder, A. I.; Sanderson, John, and Ragan, Charles: Comparative effects of prednisone and cortisone, *J. A. M. A.* 158: 1505-1508 (Aug. 27) 1955.

cellent reports concerned with the problems of administration and dosage and these will be referred to throughout this paper. There are numerous side effects to the use of these steroids, some major side effects and many minor side effects. These will be discussed separately with each disease.

RHEUMATIC FEVER

Hench, in 1949, was the first to report the use of an adrenocortical hormone, cortisone, in this instance, in the treatment of rheumatic fever.^{18, 19}

Since the first enthusiastic reports of the dramatic "cure" brought about by these hormones in acute rheumatic fever, there has developed marked controversy as to whether these steroids are of any value at all in the long range therapy of rheumatic fever. There have been several excellent reports with detailed descriptions of the response of rheumatic fever to the use of ACTH and cortisone.²⁰⁻²⁴ Following the outline of Massell,²² the results obtained with ACTH and cortisone are as follows:

1. Polyarthrititis and fever: There is almost complete agreement that these two manifestations are controlled rapidly and dramatically, the fever subsiding within 1 to 5 days and all evidences of joint inflammation disappearing within 2 to 6 days.

18. Hench, P. S., et al.: The effects of the adrenal cortical hormone 17-hydroxy 11 dehydrocorticosterone on the acute phase of rheumatic fever: Preliminary report. Proc. Staff Meet., Mayo Clinic, 24: 277-301 (May 25) 1949.

19. Hench, P. S.: The reversibility of certain rheumatic and non-rheumatic conditions by the use of cortisone or of pituitary adrenocorticotrophic hormone, Ann. Int. Med. 36: 1-38, 1952.

20. McEwen, Currier; Bunim, J. J., et al.: The effect of cortisone and ACTH on rheumatic fever, Bull. New York Acad. Med. 26: 212 (April) 1950.

21. McEwen, Currier: Recent advances in diagnosis and treatment of rheumatic fever, M. Clin. North America 353 (Mar.) 1955.

22. Massell, B. F.: ACTH and cortisone therapy of rheumatic fever and rheumatic carditis, New England J. Med. 251: 183, 221, 263 (July 29, Aug. 5, 12) 1954.

23. Subcommittee of Principal Investigators of American Council on Rheumatic Fever and Congenital Heart Disease and the Rheumatic Fever Working Party of the Medical Research Council of Great Britain: Treatment of acute rheumatic fever in children: Cooperative clinical trial of ACTH, cortisone, and aspirin, Circulation 11: 343-377, 1955.

24. Hench, P. S., et al.: Effects of cortisone acetate and pituitary ACTH on rheumatoid arthritis, rheumatic fever and certain other conditions, Arch. Int. Med. 85: 545, 1950.

2. Subcutaneous nodules: It seems probable that in some patients the subcutaneous nodule is beneficially affected, but there are conflicting reports. Massell and others²² report disappearance and suppression of formation while the Cooperative Study²³ showed no influence of the steroids on the nodules.

3. Erythema marginatum: No conclusive evidence of effect of steroids upon this manifestation has been reported yet.

4. Chorea: There is suggestive evidence that chorea is actually suppressed in some patients.

5. Elevated erythrocyte sedimentation rate: The sedimentation rate rapidly reaches normal limits. There is question whether this is due to direct suppressive action on fibrinogen and other plasma proteins, or due to suppression of the rheumatic inflammatory process. The evidence points more strongly to the latter.

6. Tachycardia and gallop rhythm: Data are not helpful as this sign may be due to active carditis, the rheumatic process itself without carditis, or to permanent myocardial damage resulting from long standing rheumatic fever.

7. Pericarditis: This has been reported to clear rapidly in over 50% of cases.^{21, 22} However, pericarditis alone is variable and transient and there are no good control series.

8. Prolonged PR interval: There appears to be return to normal during treatment in a great majority of cases, but again there is the problem as to whether this would have happened regardless of therapy used.

9. Congestive heart failure: This may be due to active rheumatic inflammation, irreversible myocardial damage, or to valvular damage. Only the first is affected by steroids and there is good evidence that approximately three-fourths of patients with congestive heart failure due to this have a significant reduction in severity of failure.

10. Duration of rheumatic fever: Nearly all evidence favors the views expressed by Barnes and Hench^{19, 25} that cortisone and ACTH are highly suppressive of rheumatic inflammation but they do not actually

25. Barnes, A. R.; Smith, H. L.; Slocumb, C. H.; Polley, H. F., and Hench, P. S.: Effect of cortisone and corticotrophin (ACTH) on acute phases of rheumatic fever, Am. J. Dis. Child. 82: 397-423, 1951.

shorten the duration of the underlying pathologic process.

11. Laboratory data: Hemoglobin and red cell count increase satisfactorily. The C-reactive protein becomes normal within 2 to 3 weeks with adequate dosage. Serum albumin increases and serum globulin decreases. The ASO titer has been reported to decrease,²⁰ but this is probably unrelated to therapy.

12. Malaise, mental clouding, and general "toxicity": There is rapid subsidence at approximately the same rate as the fall in fever.

13. Carditis: This subject has been reserved until last as it is the most controversial. Here lies the answer as to whether or not hormones are of value in the treatment of rheumatic fever. Striking as the effects of cortisone and ACTH are on fever, polyarthritides, and general "toxicity," just as dramatic results may be obtained much more simply and inexpensively with adequate doses of salicylates. This is not true of anemia, subcutaneous nodules, or the elevated sedimentation rate, but these are not in themselves of serious concern to the patient. Thus hormones will be of significant value in the treatment of rheumatic fever primarily if they prove to benefit the major manifestation of the disease which is not significantly altered by salicylates, namely, carditis. Here lies the crux of the problem. This problem has been well summarized by a series of articles in the *New England Journal of Medicine*.²⁶⁻²⁸ Numerous early reports spoke glowingly of the marked improvement in carditis with the use of hormones, the disappearance of heart murmurs and the decrease in heart size being the best criteria for reduction of carditis. Massell and McEwen reported, along with many others, a significant reduction in carditis.^{21, 22} There was reported a close relationship of results to the time which elapses between onset of the disease and onset of hormonal therapy. Massell reported that murmurs present before the onset of

treatment nearly always disappeared in patients treated within one week of onset of the initial attack and most patients remained free of murmurs after cessation of therapy. Heart size is reported to decrease more often when pericarditis is present than absent, and again the shorter the duration of rheumatic fever, the more likely is hormonal therapy to decrease heart size.

Through the cooperation of physicians of Great Britain and of the United States, a trial was designed to compare the therapeutic effects of cortisone, ACTH, and aspirin on the course of acute rheumatic fever, all patients being treated in a hospital on bed rest and protected against infections with beta-hemolytic streptococci. The results published in March 1955 were for the most part quite clear cut.²³ The study presented no evidence that rheumatic fever in children can be uniformly terminated by any of the three drugs. There was evidence that hormone treatment resulted in prompt control of certain acute manifestations, but this more rapid disappearance was balanced by a greater tendency for them to reappear for a limited time at the end of treatment. Therapy with hormones led to more rapid disappearance of nodules and of soft apical systolic murmurs. However, at the end of one year there was no significant difference between the three treatment groups in the status of the heart. "Certainly, after the full year of follow-up study, the results do not justify recommending treatment with ACTH or cortisone as a means of preventing rheumatic heart disease."²⁴

The conclusions of the cooperative study were unequivocal, but recent literature, far from clarifying the problem, has constantly added to the confusion. Numerous studies²⁹⁻³² suggested that hormones, given early in the course of the rheumatic attack in

26. Editorial, ACTH, cortisone, and aspirin in acute rheumatic fever, *New England J. Med.* 252: 408-409 (March 10) 1955.

27. Editorial, Hormones in the treatment of acute rheumatic fever, *New England J. Med.* 253: 478-480 (Sept. 15) 1955.

28. Editorial, Adrenocortical hormones for rheumatic fever, *New England J. Med.* 255: 48-50 (July 5) 1956.

29. Greenman, L., et al.: Cortisone therapy of initial attacks of rheumatic carditis. 1. Clinical data, *Am. J. Dis. Child.* 89: 426-441, 1955.

30. Done, A. K., et al.: Therapy of acute rheumatic fever, *Pediat.* 15: 522-536, 1955.

31. Wilson, May G., and Lim, Wan Ngo: Natural course of active rheumatic carditis and evaluation of hormone therapy, *J. A. M. A.* 160: 1457 (Apr. 28) 1956.

32. Markowitz, M., and Kuttner, A. G.: The effect of intensive and prolonged treatment with cortisone and hydrocortisone in first attacks of rheumatic carditis, *Pediat.* 16: 325-334 (Sept.) 1955.

doses sufficiently large to suppress the inflammatory reaction completely and continued until the disease has run its course, may reduce the incidence of residual heart disease. Stolzer even reported that cortisone, started early in the course of the disease, prevented the appearance of apical systolic murmurs and caused the disappearance of apical systolic murmurs during the treatment period to a greater extent than either ACTH or aspirin.³³ Most of these studies were poorly controlled. The fact that these differences in results could be well accounted for by poor control and selection is strongly suggested by the cooperative study and a recent well-controlled study which found no significant value of hormones over aspirin in treatment of rheumatic carditis.³⁴ Dorfman, a participant in the cooperative study, commented on these conflicting reports and concluded,³⁵ "The weight of evidence would seem to indicate that treatment with cortisone, hydrocortisone, or ACTH results in a more prompt response of certain manifestations of rheumatic fever, including some that are indicative of carditis. It would seem reasonable to treat patients with adequate doses of these substances. Hormone treatment of chronically active patients or those with severe damage has so far been unrewarding, and treatment of patients with little or no cardiac involvement would seem unnecessary in view of the excellent prognosis of such patients when treated with salicylates."

Aside from the above controversy, it must also be remembered that serious complications may accompany the use of hormones. In a recent report³⁶ to determine the effectiveness of prednisone in preventing cardiac sequelae in 11 patients with acute rheumatic fever, large doses were used for a prolonged period. Osteoporosis with vertebral compression fractures occurred in 3. There

were severe and prolonged rebound effects in 9. Five patients experienced a peculiar syndrome characterized by intense pruritis and painful erythema nodosum-like lesions of the skin. In 2, extensive panniculitis with fat necrosis and fibrinoid occlusion of venules developed. However, it was stated that none of the patients had typical evidence of carditis at the end of therapy and the findings were interpreted as indicating that the steroid treatment had introduced a new pathologic process involving vascular integrity.

Side Effects: Rebound, usually a mild exacerbation of clinical and laboratory findings, is often seen. If the rebound is severe or persistent for more than 1 to 2 weeks, further treatment is required. Masked infections may be devastating. Usual childhood infections may seriously threaten the life of the patient. However, the serious side effects, as masked infections, peptic ulcer, convulsions, etc., are rarely seen in short term therapy as that of rheumatic fever. Nevertheless, minor side effects, as mooning, abnormal body fat deposits, acne, hirsutism, stria, liver enlargement without heart failure, pigmentation, furunculosis, tremors, glycosuria, insomnia, temporary psychosis, hypokalemia, hypertension, sodium retention, and petechiae, are often reported and may be distressing to the patient though not serious. The use of steroids in children has been shown to slow the rates of statural growth and of skeletal maturation within a few weeks of onset of therapy.³⁷ However, the child's potential for growth is not altered and reduction of dosage from time to time below growth suppressing levels allows a compensatory spurt in growth to take place.

Finally, the work of Kelly should be mentioned.^{38, 39} He stated that genetic studies indicate probable inherited susceptibility to rheumatic fever and presented data indicat-

33. Stolzer, B. L.; Houser, H. B., and Clark, E. J.: Therapeutic agents in rheumatic carditis, *Arch. Int. Med.* 95: 677-688 (May) 1955.

34. Harris, T. N.; Friedman, S.; Needleman, H. L., and Saltzman, H. A.: Therapeutic effects of ACTH and cortisone in rheumatic fever: Cardiologic observations in a controlled series of 100 cases, *Pediat.* 17: 11-28 (Jan.) 1956.

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36. Smith, R. T., and Good, R. O.: Sequelae of prednisone treatment of acute rheumatic fever, *Clin. Res. Proc.* 4: 156, 1956.

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38. Kelly, V. C.: Rationale for hormone therapy in rheumatic fever, *Ann. New York Acad. Sc.* 61: 369-376 (May 27) 1955.

39. Kelly, V. C., et al.: Studies of 17-hydroxycorticosteroids: VI-Circulating concentration in patients with rheumatic fever, *Am. J. Med.* 18: 20-25 (Jan.) 1955.

ing that relative adrenal insufficiency antedates the onset of rheumatic fever. He concluded that this established a rationale on a physiologic basis for the treatment of rheumatic fever. He found remarkable subsidence of acute manifestations of rheumatic fever with no clinical evidence of rebound after therapy and astounding lack of residual cardiac damage. His data suggested that hormones may actually terminate the rheumatic process!

RHEUMATOID ARTHRITIS

Since the first report of the use of cortisone and ACTH in rheumatoid arthritis,⁴⁰ again, as with rheumatic fever, there has developed a marked controversy as to the value of these hormones in the treatment of this disease. The etiology of rheumatoid arthritis, unlike that of rheumatic fever, is undetermined and further complicates the evaluation of therapy. At present the multifocal pathologic involvement of mesenchymal connective tissue throughout the body in rheumatoid arthritis can best be explained as a non-specific disturbance characterized anatomically by systemic alterations in connective tissue, especially the extracellular elements. Microscopically this takes the form of fibrinoid degeneration, swelling and sclerosis of collagen fibrils, and an increase in metachromatic ground substance.⁴¹

With the use of adrenocortical steroids in the treatment of rheumatoid arthritis, a definite pattern of improvement is the rule,⁴² and some favorable histologic changes are described.⁴¹ Nevertheless, there is much disagreement as to the value of these hormones in the long-term treatment of rheumatoid arthritis.⁴³⁻⁵⁰

Bunim in a 4-year study⁴⁹ concluded that

40. Hench, P. S.; Kendall, E. C.; Slocumb, C. H., and Polley, H. F.: The effect of a hormone of the adrenal cortex and of pituitary adrenocorticotrophic hormone on rheumatoid arthritis, *Proc. Staff Meet., Mayo Clinic*, 24: 181-197 (Apr. 13) 1949.

41. Dresner, Ellis: Aetiology and pathogenesis of rheumatoid arthritis, *Am. J. Med.* 18: 74 (Jan.) 1955.

42. Freyberg, R. H.: Effects of cortisone and ACTH in rheumatoid arthritis, *Bull. New York Acad. Med.* 26: 206 (April) 1950.

43. Wiesel, L. L., and Barritt, A. S.: Long-term treatment of rheumatoid arthritis with para-aminobenzoic acid and cortisone acetate, *Am. J. M. Sc.* 227: 74-79 (Jan.) 1954.

the most suitable patients are those whose disease is severe, reversible, of recent development, and following a rapidly progressive relentless course. He stated that it might be useful in patients who have not responded to other antirheumatic drugs. At the end of his 4-year study, 35 per cent were still maintained satisfactorily on cortisone or hydrocortisone, using the criteria set forth by Steinbrocker.⁵¹ He obtained the most striking responses in those with rheumatoid arthritis for less than one year and in the age group 10 to 29. However, Toone,⁴⁴ Holbrook,⁴⁷ and Ragan⁵⁰ concluded that these hormones should not be used routinely but only after other measures have been adequately tried and failed. Holbrook stated, "It should be clear from these long-term studies that active rheumatoid arthritis can neither be kept suppressed nor prevented from progression with ACTH and cortisone, the proportion of failures in 4 years being approximately 95%. The outcome conceivably might have been better without treatment, owing to the occasional occurrence of spontaneous remissions." These authors found that the acute, relatively early disease is the type least suitable for ACTH and cortisone, and that patients with older

44. Boland, Edward W.: Present status of hydrocortisone as a therapeutic agent in rheumatoid arthritis, *Ann. New York Acad. Sc.* 61: 349-357, (May 27) 1955.

45. Joint Committee of the Medical Research Council and the Nuffield Foundation on Clinical Trials of Cortisone, ACTH, and other Therapeutic Measures in Chronic Rheumatic Disease: Comparison of cortisone and aspirin in treatment of early cases of rheumatoid arthritis, *Brit. M. J.* 1: 1224-1227, 1954.

46. *Idem.* Comparison of cortisone and aspirin in treatment of early cases of rheumatoid arthritis. *Brit. M. J.* 2: 695-700, 1955.

47. Holbrook, W. P.: Cortisone, ACTH, and phenylbutazone in long-term therapy of rheumatoid arthritis, *M. Clin. North America* 405 (Mar.) 1955.

48. Toone, E. C., Jr., and Irby, R.: Effect of cortisone in long-term therapy of rheumatoid arthritis, *Am. J. Med.* 41-50 (Jan.) 1955.

49. Bunim, J. J., et al.: Evaluation of prolonged cortisone therapy in rheumatoid arthritis: A 4 year study, *Am. J. Med.* 27-40 (Jan.) 1955.

50. Ragan, Charles, and Snyder, A. I.: Rheumatoid arthritis, *Disease-a-Month* (Nov.) 1955. The Year Book Publishers, Inc., Chicago.

51. Steinbrocker, O.; Traeger, C. H., and Batterman, R. C.: Therapeutic criteria in rheumatoid arthritis, *J. A. M. A.* 140: 659 (June 25) 1949.

and less acute disease, when treated with minimum doses of hormone, showed a less rapid failure rate. It is repeatedly pointed out that one cannot pass lightly over the psychologic problems associated with the use of hormones. For a painfully crippled patient to be returned to near normal within a few days, only to be obliged, as the months go by, to preside over his own disintegration, is a soul-shaking experience.

The two self-controlled reports by the Joint Committee^{45, 46} have done much to clarify the problem of hormones vs. aspirin in the treatment of rheumatoid arthritis. The trial was designed to answer a specific question: Is it possible, in early and uncomplicated cases of rheumatoid arthritis, to maintain the patient's well-being more efficiently by treatment with cortisone than by treatment with aspirin? At the end of 1 and 2 years, in no respects did the two groups differ by more than might easily have been due to chance, and in most respects they were equal. This report certainly raises serious questions concerning the superiority of cortisone over aspirin, when both are used intelligently and the patients observed objectively.

Boland,⁴⁴ in an excellent study of 150 patients unsuccessfully managed conservatively, found that substantially lower doses of hydrocortisone, as compared with cortisone, provided equal control with fewer and less pronounced complications. He found that in selected cases hydrocortisone was capable of providing continuous, adequate control of the rheumatic manifestations in a large proportion of cases. He found the success of therapy decreased with increased severity of disease and with increased duration of the arthritis before treatment.

Wiesel and Barritt found that para-aminobenzoic acid and cortisone acted synergistically, probably by PABA inhibiting hepatic destruction of cortisone. They were able to maintain patients with rheumatoid arthritis on PABA and doses of cortisone, limited so that the cortisone alone would be ineffective, for periods up to 3 years without encountering any of the dire side effects observed by others with the usual doses of cortisone and with satisfactory suboptimal suppression of the symptoms and signs of rheumatoid arthritis.

In the past two years there have been several good reports on the use of prednisone

and prednisolone in the treatment of rheumatoid arthritis.⁵¹⁻⁵⁵ These are probably the most effective hormonal agents currently available for the treatment of rheumatoid arthritis. When these agents are administered in place of the usual hormones, there is in nearly every instance striking enhancement of the therapeutic effect, evident by increased functional capacity and decrease of objective manifestations of joint inflammation. This is achieved with a lower milligram dosage of prednisone and prednisolone than of cortisone and hydrocortisone. However, the use of these agents is complicated by an increased incidence of dyspepsia and of peptic ulcer.⁵⁵ There is lack of sodium and water retention and absence of potassium loss with ordinary therapeutic doses. Also, there is a decreased tendency to elevate the blood pressure.

The addition of prednisone and prednisolone adds another consideration to the treatment of rheumatoid arthritis; that is, the discriminate selection of steroid prescribed, not merely the proper selection of candidates for treatment.⁵⁴ It would seem that prednisone and prednisolone should be used when salt and water retention is an actual or potential problem, and in patients who do not adequately respond to the older steroids or escape control after their prolonged use. Cortisone or hydrocortisone should be used in those patients with a history of peptic ulcer or gastric irritation.

Still's disease is mentioned only in that its treatment is similar to the treatment of adult rheumatoid arthritis.^{56, 57} Steroids should be used only when all other measures have failed. In a cooperative study

52. Margolis, H. M.; Barr, J. H.; Stolzer, B. L.; Eisenbeis, C. H., Jr., and Martz, E. W., Jr.: Effects of prednisone (meticorten) on manifestations of rheumatoid arthritis, *J. A. M. A.* 158: 454-458 (June 11) 1955.

53. Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: Studies on metacortandralone and metacortandracin in rheumatoid arthritis, *J. A. M. A.* 157: 311-317 (Jan. 22) 1955.

54. Boland, E. W.: Prednisone and prednisolone therapy in rheumatoid arthritis, *J. A. M. A.* 160: 613-621 (Feb. 25) 1956.

55. Cohen, A.; Turner, R., and Dunsmore, R.: Prednisone in the treatment of rheumatoid arthritis, *New England J. Med.* 253: 1150-1152 (Dec. 29) 1955.

56. Bollet, A. J.; Black, R., and Bunim, J. J.: Major undesirable side-effects resulting from prednisolone and prednisone, *J. A. M. A.* 158: 459-463 (June 11) 1955.

similar to the adult study,⁵⁷ both treatment groups (cortisone and aspirin) improved clinically to a similar extent.

The treatment of choice in rheumatoid spondylitis, in the opinion of most authors, is radiotherapy and/or phenylbutazone.⁵⁹ Only rarely, when the disease is sustained despite all other measures and when peripheral joint involvement is a major feature, should steroid treatment be considered.

The repeated intra-articular injection of the tertiary-butyl acetate ester of hydrocortisone has been found to be of value in approximately 50% of patients with one or a few large joints as a major cause of disability.⁵⁸⁻⁶⁰ Best results are obtained when combined with intense physical therapy and orthopedic procedures.

Side Effects: The side effects of prednisone and prednisolone have been discussed. Major adverse reactions to the older steroids are psychotic reactions, edema, leucopenia, gastrointestinal bleeding, and hypertension.^{48, 49} Mild side effects are euphoria, mooning, hirsutism, buffalo hump, acne, amenorrhea, flushing of face, mild hypertension, weakness, rashes, paresthesias, hepatomegaly, headache, purpura, diabetes, and dry skin.

SYSTEMIC LUPUS ERYTHEMATOSUS

At last we have reached a point where controversy is no longer a major issue. The use of adrenocortical steroids in the treatment of systemic lupus erythematosus has been well documented,⁶¹⁻⁶⁷ and has been summed up in two excellent reviews.^{68, 69} It is generally believed that the basic disease process is not altered by hormonal

therapy, though the effects upon the acute disease process are dramatic.

The decision whether to use steroids is based upon the number, severity, and importance of disease manifestations. If the disease is relatively inactive in terms of constitutional manifestations, such as fever and weakness, and when no evidence of active renal, cardiac, or central nervous system involvement is present, the steroids are not indicated. Otherwise, steroids are used and the initial dose is increased until control of the disease occurs or significant side reactions develop. Improvement is based upon clinical, not laboratory grounds. When the maximum level is reached, the dose is decreased gradually until maintenance levels are reached or the drug is discontinued.

The most dramatic response is a remarkable defervescence. Improvement in joint symptoms is also striking but is slower and less complete in those with deformities. Skin and mucous membrane changes clear completely but slowly. In those with nephropathy of recent onset, improvement has been observed, but not in those of late onset. Striking relief of cardiomegaly and

57. Ansell, B. M.; Bywaters, E. G. L., and Isdale, I. C.: Comparison of cortisone and aspirin in treatment of juvenile arthritis, *Brit. M. J.* 1: 1075-1077, 1956.

58. Wilson, H.; Fairbanks, R.; McEwen, C., and Ziff, M.: Studies on the metabolism of adrenal cortical steroids in the synovial cavity in rheumatoid arthritis, *Ann. New York Acad. Sc.* 61: 502-510 (May 27) 1955.

59. Hollander, J. L.: The use of intra-articular hydrocortisone, its analogs and its higher esters in arthritis, *Ann. New York Acad. Sc.* 61: 511-516 (May 27) 1955.

60. Duff, Ivan F.; Robinson, W. D.; Mikkelsen, W. M., and Chatelin, N. H.: Intra-articular hydrocortisone in rheumatoid arthritis, *M. Clin. North America* 413 (Mar.) 1955.

61. Shulman, L. A., et al.: Systemic lupus erythematosus, *Disease-a-Month* 32-40 (May) 1956.

62. Haserick, J. R.: Effect of cortisone and corticotropin on prognosis of systemic lupus erythematosus, *Arch. Dermat. and Syph.* 68: 714, 1953.

63. Soffer, Louis J.; Ludemann, H. H., and Brill, G.: The effect of corticotropin and adrenal steroids on management of acute disseminated lupus erythematosus, *Ann. New York Acad. Sc.* 61: 418-429 (May 27) 1955.

64. Soffer, L. J., and Bader, R.: Corticotropin and cortisone in acute disseminated lupus erythematosus, *J. A. M. A.* 149: 1002-1008 (July 12) 1952.

65. Soffer, J. L.; Elster, S. K., and Hammerman, D. J.: Treatment of acute disseminated lupus erythematosus with corticotropin and cortisone, *Arch. Int. Med.* 93: 503-514 (April) 1954.

66. Dubois, E. L., et al.: Corticotrophin and cortisone treatment for systemic lupus erythematosus, *J. A. M. A.* 149: 995-1002 (July 12) 1952.

67. Boehr, G., and Soffer, L. J.: Treatment of disseminated lupus erythematosus with cortisone and adrenocorticotropin, *Bull. New York Acad. Med.* 26: 229 (Apr.) 1950.

68. Haserick, J. R.: Modern concepts of systemic lupus erythematosus, *J. Chronic Dis.* 1:317, 1955.

69. Harvey, A. M.; Shulman, L. E.; Tumulty, P. A.; Conley, C. L., and Schoenrich, E. H.: Systemic lupus erythematosus: Review of the literature and clinical analysis of 138 cases, *Medicine* 33: 291-437, 1954.

congestive heart failure is seen in those without renal disease. Murmurs are usually unchanged. Pleuritic pain may regress rapidly, but objective changes are slower, and also slower when pneumonitis is present. Anemia is markedly alleviated except in presence of renal disease. There is usually an increase in the white cell count and a decrease to normal of the sedimentation rate. Protein abnormalities revert to normal in approximately 50% of cases. In one series,⁶⁸ 50% of the patients required continuous steroid therapy, 25% required sporadic or minimal steroids during the phase, and in 25% it was possible to withdraw steroids completely during remissions.

Though the clinical signs disappear, the fact that the laboratory tests remain positive in many patients indicates continued activity. Harvey,⁶⁹ with this in mind stated, "What is needed is a reliable index of disease activity which is not currently available." Most authors do not believe that the steroids reduce mortality though the morbidity is markedly reduced. Haserick,⁶² however, believes the mortality has been reduced by the administration of steroids.

Due to the frequent occurrence of fluid retention and hypertension when the older steroids are used, prednisone and prednisolone have been added to the therapeutic armamentarium.⁷⁰⁻⁷³ The side effects of these newer steroids are slower in appearing though the increased ulcerogenic and diabetogenic potency is disturbing. The pattern of clinical improvement closely parallels that obtained by treatment with the older steroids. The primary advantages of these newer steroids is that they cause slightly less sodium retention, which is especially helpful in the treatment of patients with borderline congestive heart fail-

ure and renal disease.

Side reactions with both the newer and older steroids are frequent and must be judiciously guarded against. The lupus diathesis must be remembered especially because intercurrent infections are common and require both steroids and antibiotics for treatment. Also, when side reactions appear, decision must be made as to whether these are due to treatment or to an exacerbation of the disease, especially convulsions and psychoses.⁶¹

POLYARTERITIS NODOSA

Polyarteritis nodosa is a recurrent, progressive, necrotizing inflammatory disease of muscular type arteries with polyneuritis, fever, and multiple-system disease as the common manifestations.⁷⁴ In order to evaluate the influence of treatment, one must consider the natural course of the disease. As more cases of polyarteritis nodosa have been diagnosed prior to death, the estimated mortality rate has fallen from 95% to 50%.⁷⁵ Remissions are not rare and despite an average life expectancy of about two years, cases of as much as 25 years duration have been reported.

ACTH and cortisone bring immediate symptomatic relief to most patients with polyarteritis nodosa.^{72, 75-79} Marked subjective improvement usually appears within 24 to 72 hours after the initiation of therapy. Malaise, weight loss, diarrhea, abdominal pains, arthritis, muscular pains, weakness, and asthma are all favorably affected. Peripheral neuropathy is quite resistant and is seldom alleviated. Clinical and labora-

70. Bollet, A. J.; Segal, S., and Bunim, J. J.: Treatment of systemic lupus erythematosus with prednisone and prednisolone, *J. A. M. A.* 159: 1501-1507 (Dec. 17) 1955.

71. Dordick, J. R., and Gluck, E. J.: Preliminary clinical trials with prednisone (meticorten) in rheumatic diseases, *J. A. M. A.* 158: 166-170 (May 21) 1955.

72. Steinberg, C. L., and Rodenburg, A. I.: Metacortandracin in the treatment of disseminated lupus erythematosus and periarteritis nodosa, *Ann. Int. Med.* 44: 316-336 (Feb.) 1956.

73. Dubois, E. L.: Prednisone and prednisolone in the treatment of systemic lupus erythematosus, *J. A. M. A.* 161: 427-433 (June 2) 1956.

74. Zeek, P. M.: Periarteritis nodosa and other forms of necrotizing angiitis, *New England J. Med.* 248: 764-772 (Apr. 30) 1953.

75. Malkinson, F. D., and Wells, G. C.: Adrenal steroids in periarteritis nodosa, *Arch. Dermat.* 71: 492-499 (Apr.) 1955.

76. Baggenstoss, A. H.; Shick, R. M., and Polley, H. F.: Effect of cortisone on lesions of periarteritis nodosa, *Am. J. Path.* 27: 537, 1951.

77. Symmers, W. St. C.: Pathological findings in cases of periarteritis nodosa after treatment with adrenocorticotrophic hormone, *J. Path. & Bact.* 66: 109-118 (July) 1953.

78. Ehrenreich, T., and Olmstead, E. V.: Malignant hypertension following the administration of cortisone in periarteritis nodosa, *Arch. Path.* 52: 145-154, 1951.

79. Simpson, J. H.; Hall, M., and Morgan, B.: Polyarteritis nodosa treated with ACTH: Report of a case with recovery, *Brit. M. J.* 2: 659-660, 1953.

tory studies are often correlated with symptomatic improvement. Temperature often declines to normal and the sedimentation rate declines uniformly, but rarely to normal. Elevated blood pressures remain unchanged in the majority of patients and, as a rule, renal disorders show no change or progress. Steroids have been reported to aggravate renal lesions.⁷⁸ Symmers⁷² and Baggenstoss⁷⁶ have reported a serious therapeutic paradox. In essential organs showing diffuse widespread arterial involvement, posttreatment healing with fibrous luminal obliteration may lead to multiple infarctions and/or to hypertension.

Complete healing of all arterial lesions at autopsy has been described in 5 cases prior to hormonal therapy⁷⁵ and in 6 cases following hormonal therapy.⁷⁶ However, most authors report that steroids are somewhat limited in producing arterial healing though disappearance of inflammatory changes are often seen on biopsy after therapy.

Upon withdrawal of therapy, some exacerbation of symptoms is seen in most patients, but reintroduction of small maintenance doses usually results in improvement. Complete remissions up to one year have been described,⁷⁹ but, as previously noted, spontaneous remissions are not rare. Despite good initial therapeutic results, it is apparent, over the long term, that the efficacy of steroids is greatly limited. However, in polyarteritis nodosa hypersensitivity has been incriminated as one of the etiologic factors, and when a specific antigen-antibody mechanism is involved, adrenal steroids might produce long-term therapeutic results by depressing antibody levels and synthesis.

In one report,⁷² prednisone has been found quite valuable as the required doses of older steroids are often so high that it is almost impossible to maintain electrolyte balance. Three patients were reported and 2 showed marked improvement following shift from older steroids to prednisone.

In summary, adrenocortical steroids are at best two-edged weapons and full evaluation of results in the light of the varied problems presented awaits long term observations and comparison of treated and untreated patients. Nevertheless, these are the most effective therapeutic agents available despite the lack of demonstration of a specific action against etiologic disease factors. Their use must be weighed judiciously

in every case. The best results may be expected in a relatively young patient in whom treatment is begun prior to the development of extensive visceral lesions. Treatment should be continued over a period of time sufficient for abatement of abnormal signs, symptoms, and laboratory findings.

DERMATOMYOSITIS

Dermatomyositis is the rarest of the collagen diseases and is described as, "A collagen disease in which non-suppurative polymyositis with creatinuria is the distinguishing characteristic, commonly accompanied by dermatitis and edema."⁸⁰ The overall mortality is 50% and spontaneous remissions may last as long as 8 years. ACTH and cortisone abolish the inflammatory manifestations (fever, erythema, tachycardia, leucocytosis, elevated sedimentation rate). This is a non-specific effect but of enormous symptomatic relief to the patient.⁸¹⁻⁸³ More specific improvement has been reported in decreased creatine excretion,⁸⁴ and conversion of muscle biopsy to normal.⁸⁵ Prolonged remissions have been induced with steroid therapy, but occasional relapses follow withdrawal of hormones.⁸⁶ Domzalski reported a nice response in two patients but steroids had to be discontinued due to appearance of gastric ulcers in one patient and an acute psychosis in the other. Wedgwood⁸⁷ in a report of 26 cases in children found steroids to be of no effect in

80. Domzalski, C. A., and Morgan, V. C.: Dermatomyositis: Diagnostic features and therapeutic pitfalls, *Am. J. Med.* 19: 370-382 (Sept.) 1955.

81. Lewis, Clein: Acute dermatomyositis, *Brit. M. J.* 2: 1357-1358 (Dec. 19) 1953.

82. Thorn, G. W.; Forsham, P. H.; Frawley, T. F.; Hill, S. R., Jr.; Roche, M.; Straehelin, D., and Wilson, D. L.: Clinical usefulness of ACTH and cortisone, *New England J. Med.* 242: 783, 824, 865 (May 18, 25, June 1) 1950.

83. Lever, W. F.: ACTH and cortisone in diseases of the skin, *New England J. Med.* 245: 359, 1951.

84. Oppel, T. W.; Coker, C., and Milhorat, A. T.: Effect of pituitary adrenocorticotropin (ACTH) in dermatomyositis, *Ann. Int. Med.* 32: 318-324 (Feb.) 1950.

85. Ragan, C.: Proceedings of the first clinical ACTH conference, 423-428, The Blakiston Co., Philadelphia, 1950.

86. Dunlop, D. M.: The endocrines in dermatology, *Brit. J. Dermat.* 63: 43, 1951.

87. Wedgwood, R. J. P.; Cook, C. D., and Cohen, J.: Dermatomyositis: Report of 26 cases in children with a discussion of endocrine therapy in 13, *Pediatr.* 12: 447-466 (Oct.) 1953.

those patients with crippling residua and a relatively inactive process, but in 3 children with acute, active disease there was rapid and striking symptomatic improvement. Two of these 3 children later succumbed to the disease, demonstrating that these agents do not necessarily change the course of the disease. However, the high morbidity and mortality of the disease justify the use of these hormones, especially in the acute forms of the disease.

The only report in the literature of the use of prednisone in dermatomyositis stated, "The newer steroids have been used in one case and seem valuable because of the fewer side reactions."⁸⁸

SCLERODERMA

The course of scleroderma cannot be said to follow any particular pattern, even when fatal.⁸⁹ The picture that the patient presents may remain unaltered during life and these patients can achieve a status quo for varying periods of time. This possible occurrence coincidentally with some medication complicates the evaluation of therapy.

There are conflicting reports as to the usefulness of steroids in scleroderma.⁹⁰⁻¹⁰⁰ Thorn found steroids to be of questionable value,⁸² but Taubenhau⁹² found definite

improvement in the histologic picture in one patient. Evans⁹¹ found no drug therapy to be as consistently beneficial as extensive sympathectomy. Hines⁹⁵ and Bayles⁹⁶ reported temporary improvement with return of symptoms 2 to 3 weeks after discontinuation of therapy. Lunseth,⁹⁷ Sharnoff,⁹⁸ and Calkins⁹³ reported acceleration of scleroderma renal lesions when treated with steroids, and Calkins felt that steroids were contraindicated in scleroderma with renal involvement. West,⁹⁹ Beigelman,¹⁰⁰ and Salomon⁹⁰ treated patients with severe pulmonary lesions and skin lesions and found mild to definite improvement in the clinical picture but with no change noted in the roentgenologic picture and no improvement in the pulmonary function studies. The skin lesions became less indurated⁹⁹ and there was improvement in the performance of movement in all involved areas.⁹⁰

In one report of the use of prednisone in scleroderma,⁹⁴ prednisone was found to be 3 to 4 times as potent as cortisone in suppressing skin and joint manifestations and there was no increased severity of side effects.

Salomon⁹⁰ concluded that the administration of steroids for scleroderma was indicated in those cases in which the site and extent of involvement portended serious consequences. Leinwand⁸⁹ concluded that in adequate doses steroids were the only therapeutic agents which offered any hope to the patient with rapidly advancing disease. Whether steroids are contraindicated

88. Hyman, I.; Arbesman, C. E., and Terplan, K. L.: Dermatomyositis following penicillin injections, *Neurology* 6:63-67 (Jan.) 1956.

89. Leinwand, I.; Duryee, A. W., and Richter, M. M.: Scleroderma (based on a study of over 150 cases), *Ann. Int. Med.* 41: 1003-1041, 1954.

90. Salomon, A.; Appel, B.; Dougherty, E. F.; Herschfus, J. A., and Segal, M. S.: Scleroderma: Pulmonary and skin studies before and after treatment with cortisone, *Arch. Int. Med.* 95: 103, 1955.

91. Evans, J. A.; Rubitsky, H. J., and Perry, A. W.: Treatment of diffuse progressive scleroderma, *J. A. M. A.*, 151: 891-899 (Mar. 14) 1953.

92. Taubenhau⁹², M., and Lev, M.: Clinical and histological observations on a case of scleroderma treated with cortisone, *Arch. Int. Med.* 87: 583-593 (Apr.) 1951.

93. Calkins, Evan: Case records of the Massachusetts General Hospital, *New England J. Med.* 254: 1002 (May 24) 1956.

94. Rodnan, G. P., et al.: Observations on the use of prednisone in patients with progressive systemic sclerosis (diffuse scleroderma), *Ann. Int. Med.* 44: 16-29 (Jan.) 1956.

95. Hines, E. A., Jr.; Wakim, K. G.; Roth, G. M., and Kierland, R. R.: The effect of cortisone and adrenocorticotrophic hormone (ACTH) on the peripheral circulation and blood pressure in scleroderma, *J. Lab. and Clin. Med.* 36: 834, 1950.

96. Bayles, T. B.; Stout, C. F.; Stillman, J. S., and Lever, W.: The treatment of scleroderma with adrenocorticotrophic hormone: Preliminary observations, in proceedings of the first clinical ACTH conference, edited by J. R. Mote, The Blakiston Co., Philadelphia, 1950.

97. Lunseth, J. H.; Baker, L. A., and Shefrin, A.: Chronic scleroderma with acute exacerbation during corticotropin therapy: Report of case with autopsy observations, *Arch. Int. Med.* 88: 783, 1951.

98. Sharnoff, J. G.; Garideo, H. L., and Stein, I. D.: Cortisone treated scleroderma: Report of case with autopsy findings, *J. A. M. A.*, 145: 1230, 1951.

99. West, J. R.; McClement, J. H.; Carroll, D.; Bliss, H. A., and Kuschner, M.: Effects of cortisone and ACTH in cases of chronic pulmonary disease with impairment of alveolar-capillary diffusion, *Am. J. Med.* 10: 156, 1951.

100. Beigelman, P. M.; Goldner, F., Jr., and Bayles, T. B.: Progressive systemic sclerosis (scleroderma), *New England J. Med.* 249: 45, 1953.

in the face of scleroderma renal disease is yet to be settled.

SUMMARY AND CONCLUSIONS

1. The collagen diseases are defined and the pathologic characteristics common to these diseases are described. The adrenocortical hormones and their actions are discussed.

2. Mechanisms of action of the adrenocortical steroids are briefly discussed.

3. There is little to choose between the use of steroids or aspirin in the management of rheumatic fever. However, very early use of hormones in adequate doses for a prolonged period may lead to a definite decrease in complications in rheumatic fever. Until a well controlled report can be obtained of the "natural" history of rheumatic fever after therapy with steroids over a period of 20 years, similar to the report of Bland and Jones¹⁰¹ before the use of steroids, no definite conclusions can be drawn.

4. Adrenocortical steroids should be reserved for those patients with rheumatoid arthritis who are refractory to adequate, well-managed conservative therapy.

5. Despite the risks attendant on the use of adrenocortical steroids, they are the most effective agents available for the treatment of systemic lupus erythematosus, polyarteritis nodosa, dermatomyositis, and scleroderma. No cures result. It is possible that some patients may be maintained in a state of remission for an indefinitely prolonged period of time with judicious treatment.

6. Prednisone and prednisolone are the steroids of choice for the treatment of the collagen diseases. The actions of prednisone and prednisolone are similar to the actions of the older steroids, with the added advantages of increased potency and significantly decreased side effects. However, the ulcerogenic action of these newer agents must be guarded against.

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101. Bland, E. F., and Jones, T. D.: Rheumatic fever and rheumatic heart disease; 20 year report on 1000 patients followed since childhood, *Circulation* 4:836-843 (Dec.) 1951.

The American people spent more than \$11.8 billion for personal health services during 1956, Health Information Foundation reports. More than 25 per cent of this sum, or almost \$3 billion, was covered by voluntary health insurance.

"One third of the people of the United States today are infected with live tubercle bacilli."

Health Magazine Describes Dentistry of Tomorrow—Permanent teeth really will be permanent for most of the children growing up in the 1960s and a trip to the dentist then will be quite different from one today, an American Dental Association official has predicted.

Peter C. Goulding, secretary of the American Dental Association's council on scientific session, said tooth decay will become less and less a problem as the full effects of fluoridation and other preventive measures are realized. Then other dental disorders will receive most of the dentist's attention.

Writing in the April Today's Health, the American Medical Association's consumer magazine, Goulding pointed out that the major cause of tooth loss is periodontal disease, the disorders that attack the gums and other dental supporting tissue. Even if a person's teeth survive the onslaught of decay, they usually are lost in later life because of periodontal disease.

Dentists now spend 40 per cent of their time repairing the ravages of decay, but in 10 years they will be spending most of their time on prevention of disease and the rehabilitation of mouths damaged by disease. People will be having more appointments at less cost and without the pain and discomfort "so often and so mistakenly associated with dental treatment," he said.

Fear of pain is probably the chief reason why only 45 per cent of the public sees a dentist each year. Yet even today's anesthetics, treatments, and particularly the newly developed high-speed drills make this fear largely groundless.

By 1967 several other developments now in the research stage will make dental treatment better and even more comfortable.

Remineralizing agents may be routinely applied to the teeth to repair weakened enamel before cavities can start. Effective anti-enzyme agents may be in routine use to prevent decay. Filling materials now being tested may be perfected. One would stimulate in the repaired tooth the formation of secondary dentin, the substance underneath the enamel layer, while another would "grow" to the tooth surface and actually help ward off future decay.

A radically new x-ray machine, already used experimentally, is likely to be in general use. Called the panoramic x-ray, it revolves around the patient's mouth, taking a picture of all the teeth on one film.

Even the future office and type of practice will be greatly changed, Goulding said. Instead of one man working alone in a small office, almost all dentists will have one or two assistants. A large number will be practicing with groups of specialists. In such an office, an over-all plan of treatment would be outlined for the patient, with each specialist giving treatment in his field.

The payment of dental costs probably will be different. Instead of the current post-payment plans that spread the expenses over one or two years, there probably will be prepayment plans such as are now available for medical expenses.

There will be fewer dentists, proportionately, than there are now, but they will treat more patients—perhaps 100 million in 1965 as compared with 75 million in 1955. And dental costs will be less over a lifetime than they are now . . .

Tips Given for Motion Sickness Prevention—

You don't have to worry much any more about that old vacation bugaboo, motion sickness, according to a Minneapolis doctor.

Under most circumstances, motion sickness can be warded off, and even when preventive measures fail, drugs are available to give relief, Dr. John E. Eichenlaub said in April Today's Health, the American Medical Association's consumer magazine.

Motion sickness results from "too much nerve-ticking action" in the ear's labyrinth, the organ that helps a person keep his balance. Keeping the head steady reduces this action. The head can be steadied by leaning it against a headrest, bracing it in position with pillows or by focusing the eyes on the horizon.

It is not wise, he said, to focus on rapidly passing objects, such as autos or telephone poles, since the background seems to "dip and plunge." The same thing happens when one reads or does fancy work. It's all right to read if you choose big type and periodically look away. Crocheting and knitting should be done only if you can do it without looking, he said.

Youngsters can be encouraged to focus on the horizon by playing animal- or tractor-spotting games, but not license-spotting games.

This background dipping and plunging effect is probably the chief reason for extra risk of sickness in certain airplane seats, especially in those on the left side just back of the wing, he said. The plane usually turns left and when the passenger can see down but can't get a broad long view, he looks at the passing landscape with short, rapid eye movements. So stay on the right, either front or rear, and keep the eyes on the horizon to minimize air sickness, Dr. Eichenlaub advised.

Experiments have shown that a person lying with a pillow directly under his head is much more likely to get sick than one lying with his head tipped back slightly, he said. In a plane or bus the seat can be tilted back and the headrest used without a pillow, or with the pillow behind the back. The standard deck chair holds the head in just about the right position.

A trip to the deck may give relief in the early stages of seasickness, but not because of the fresh air. Tests have shown that fresh air has little effect on motion sickness. The walk around the deck helps because you can see the horizon and because you have a change in the type of motion. Dr. Eichenlaub also noted that the effects of a ship's motion are much less noticeable amidship than they are fore and aft.

There have been countless pieces of conflicting advice about what to eat before traveling, but most authorities agree that light meals are definitely desirable. Once under way light or heavy meals won't make any difference. He said the belief that one travels better by starting out with a hangover is "certainly wrong."

Previous episodes of sickness may make a person get sick sooner, and the more he thinks and talks about impending illness the more likely it is that trouble will materialize. This is especially true of children, he said.

However, many drugs are now available for prevention and cure of motion sickness. An Army study of 26 drugs for seasickness showed

Marezine, Bonamine, and Phenergan to be the most effective. An airline study showed that Marezine and Bonamine were superior remedies. Dramamine, one of the oldest antimotion-sickness drugs, is also effective against sea and air sickness, while Trimeton is good for air sickness.

These drugs are most effective if they are taken at least half an hour before departure. Most are also effective even after vomiting, he said.

Tuberculosis Patients Need Immediate Hospitalization—A person with a newly diagnosed case of tuberculosis should be hospitalized immediately, according to a guest editorial in the April 13 Journal of the American Medical Association.

"The really critical period in treatment of tuberculosis falls in the first few days or weeks after diagnosis," Dr. R. H. Browning said. He is from the Ohio Tuberculosis Hospital and the Ohio State University College of Medicine, Columbus.

Into this brief period are crowded the initial decisions about the seriousness and treatment of the disease, the formation of the patient's attitudes toward his disease, and the establishment of protective measures for his family. These can be carried out best if the patient is in a tuberculosis hospital.

The hospital has all the necessary equipment for accurate diagnosis and evaluation of the disease. It is the best place to start the patient on the most effective drugs. Too often, the patient at home may forget or refuse to take medicine.

Only rarely is it possible to isolate a patient at home, he said. Fortunately, modern treatment makes the early active stage fairly brief and hospital care is not necessarily prolonged for public health reasons.

However, the time in the hospital is important since it offers an opportunity for the patient to learn about his disease and the limitations it imposes upon him. The practicing physician is usually too busy to devote the time required for educating a new patient. Failure to understand leads to an excessive rate of progression and relapse, he said.

Thus hospitalization should be prompt, so the patient "may pass through his critical period safely and be on his way toward convalescence with minimum risk to himself and his associates," Dr. Browning concluded.

Physicians Increase Role in Civic Activities—Thousands of American physicians today are disproving the misconception that medicine is "an ivory tower papered with greenbacks" by joining other groups in community service projects.

According to an editorial in the March 15 Journal of the American Medical Association, the doctors are joining in such "nonmedical" activities as safety campaigns, "get-out-the-vote" movements, and school building programs. More and more doctors are finding the time to serve on chambers of commerce, school boards, and better government committees.

All these activities actually are linked to better health for the doctor's community. But more than that, they offer a means of putting the doctor's practice "in the proper perspective . . ."



SURVEY OF BLOOD TRANSFUSION SERVICES

Dr. Frank E. Wilson, executive vice president of the Joint Blood Council, has announced the launching of a nationwide survey of blood transfusion services. The 2-year study, made possible by a Public Health Service grant of \$50,000, will collect, analyze and disseminate information of vital importance in normal peacetime blood banking as well as in civil and military defense planning.

A census of the country's blood collection and distribution facilities will be only one phase of this survey, the most comprehensive in its field ever conducted. Among its objectives are preparation of guidelines and standards for accreditation of blood banks, development of a glossary of terms and solution of numerous nomenclature problems, inventory of research in blood and blood derivatives, and the assembling and analysis of needed data appertaining to these objectives.

Questionnaires and field sampling will be the principal media of the survey.

Dr. Wilson will serve as study director, with Mr. Paul T. Rees as associate director. The latter, a resident of Arlington, Va., was for nine years sales manager and director of trade relations for a national pharmaceutical house following his retirement from the Navy. During World War II he was in charge of the materiel section of the Navy's whole blood program.

A national postal card survey, which is a preliminary screening for the main study, already is under way and the response has been excellent, said Dr. Wilson. In January nearly 10,000 cards were sent to hospitals, clinics and other institutions asking how many transfusions were given to patients. In each instance information was requested on sources of blood used—that is, whether it was obtained from Red Cross, a community blood collection agency, or some

other facility, or whether or not procured by the using institution.

A project advisory committee of representatives from the Council's member institutions and research consultants will guide the survey.

Joint Blood Council, established in 1955 with headquarters in Washington, D. C., is a voluntary organization incorporated by five nonprofit agencies. These are the American Medical Association, American Association of Blood Banks, American Hospital Association, American National Red Cross and American Society of Clinical Pathologists.

TRANQUILIZERS, AN IMPORTANT DEVELOPMENT

A University of Michigan psychiatrist has branded as "unfairly critical" the attitude of those who contend that tranquilizers are merely "chemical straight jackets" designed to make the patient more amenable and submissive.

Speaking at a meeting of the Michigan Clinical Institute, Dr. James G. Miller, Professor of Psychiatry at the University's School of Medicine, described the tranquilizers as "one of the most exciting and important kinds of development in medicine."

Dr. Miller reminded those critics who term tranquilizers "straight jackets" and "medication into submission" that similar things were said when the anesthetics first appeared by those who, in effect, challenged the right of physicians to ease pain.

The Michigan doctor emphasized that a vast amount of clinical observation, social observation and experimentation in behavioral techniques is required before it can be said that tranquilizers limit personality or improperly restrict creativity any more than "other drugs like sedatives and anesthetics which are required for specific medical illnesses."

Dr. Miller described studies currently being conducted at the University's Mental Health Research Institute to determine some of the effects of the tranquilizers on normal human beings. The studies indicated, for example, that a normal dosage of meprobamate has no effect on the skills required for safe driving, as determined by a battery of visual, perception, steadiness and driving tests. He said the Institute is also developing a series of electronic tests designed to measure reasoning ability and sensory and perceptual ability.

Dr. Miller also described tests with animals conducted at other institutions, which help to determine effects of the drugs on behavior—whether or not, for example, having learned to respond in a certain way to a stimulus, the animals under tranquilizers forget what they have learned. These researchers found that meprobamate had no effect on this conditioned response. Other tranquilizers, however, were reported to affect behavior in these circumstances.

Two other members of the University of Michigan School of Medicine, Dr. Raymond H. Waggoner, Chairman of the Department of Psychiatry, and Dr. R. W. Gerard, Professor of Neurophysiology in the Department of Psychiatry, also spoke on the subject of tranquilizers.

Dr. Waggoner showed charts which described the usage, dosages and potential side effects of 13 tranquilizers being used today, including chlorpromazine, reserpine and meprobamate, the three most widely used. The charts indicated that these three drugs alone have been used successfully in the treatment of more than a score of conditions, but that, of the three, only meprobamate has no reported contraindications, indicating that it is the only one of the leading tranquilizers that may be given in the presence of any disease or condition.

Dr. Gerard described tranquilizers of the types exemplified by chlorpromazine, reserpine, azocyclonol and hydroxyzine as most effective in the treatment of psychoses, and meprobamate of greatest value in the "larger population of neurotic and tense individuals."

Conceding that much was still unknown about the way that tranquilizers work, all three Michigan doctors cautioned against over-enthusiasm and indiscriminate use of the tranquilizing drugs. Dr. Gerard said that, to obtain further data, the National

Institute of Mental Health, in collaboration with the National Academy of Sciences and the American Psychiatric Association, is conducting a series of studies on the tranquilizers.

A FILM FOR DIABETICS

The film *Urine Sugar Analysis for Diabetics*, developed in cooperation with the medical profession, is available at no charge to the medical and allied professions through Ames Company, Inc.

The film was made as a visual aid to be used in the education of diabetic patients and shows the relationship between carbohydrates and insulin. It also explains in lay language the meaning of various diabetic conditions. It has been produced on 16 mm. film in color and sound track with a running time of approximately 10 minutes. Appropriate "hand-out" literature accompanies the film.

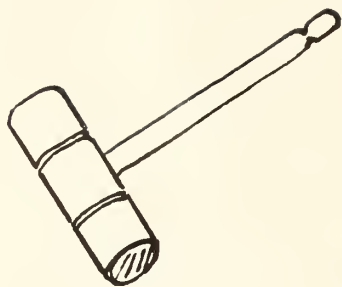
Showings at diabetic clinics, diabetic lay societies and other diabetic groups must be requested by the medical or allied professions to Ames Company, Inc., Elkhart, Indiana or an Ames representative.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, for the 1958 Part I Examinations are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt of applications is September 1, 1957. No applications can be accepted after that date.

Candidates for admission to the examinations are required to submit, with their application, a typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application, or the year prior to their request for reopening of their application. This information is to be attested to by the record librarian of the hospital or hospitals where the patients are admitted and submitted on paper 8½x11". Necessary detail to be contained in the list of admissions is outlined in the Bulletin and must be followed closely.

Current Bulletins outlining present requirements may be obtained by writing to the Secretary, Robert L. Faulkner, M. D., 2105 Adelbert Road, Cleveland 6, Ohio.



President's Page

I have long advocated a President's Page in the State Journal but never anticipated that I would have the responsibility of writing the page, particularly so soon after it was made part of the Journal.

The business side of medicine has been forced into a prominent position in recent years because of many factors. The annual meeting is too long an interval between business sessions to keep abreast of the many problems in medical practice. The time allotted for the business sessions at our annual meetings is much too short for adequate discussion of our business without a thorough study and screening of our problems before they are brought on the floor at our annual assembly.

The bold action of our State Association at the Birmingham meeting (1956) in enlarging the size and activity of the Public Relations office and Committee was one of the ways of getting the Association's problems properly and promptly handled. The aggressive manner in which all committees have carried out their assignments in the past year tends to show that we have steered our course in the right direction. I must commend to the Association these men who have given up a great part of their rest days each week to attend to the Association's business and many times travelling half way across the state to do it. The energies and enthusiasm they have shown are inspiring. These are the members who know best that the elevation of annual dues is absolutely essential in carrying out our public relations responsibilities.

During World War II I served with many medical officers from all over the country

who were my juniors. Most of those recently out of medical schools or early in their professional practice were quite bitter about organized medicine and were most critical about how the medical organizations helped them so little in getting a start and even seemed hostile in keeping them from becoming active and prominent in the Associations.

This is the time when the Medical Association of Alabama needs the thinking and energies of all its members. I hope that the President's Page will become the open forum of the Association where all can send their problems and where answers can be given and all profit from them.

I think it is particularly important that the young men who are just starting in practice in our state should thoroughly understand their rights, privileges and responsibilities.

There was a time in our history when physicians played the part of doctor, lawyer and family counsellor. Much of this work has been taken over by the clergy, psychologists and psychiatrists, but there still remains a large sphere of influence in every community where our talents are needed. Tradition has taught our profession to measure success by useful citizenship as well as professional excellence.



ORGANIZATION SECTION

THE A. M. A.'s LEGISLATIVE PROGRAM

The Committee on Legislation of the American Medical Association has made important changes in the legislative approach of the Association. During the 84th Congress there was a substantial increase in legislative activity concerning bills of medical interest; there is every indication that this increased activity will continue during the 85th Congress. As a result, the A. M. A. Committee on Legislation formulated a plan to insure that the views of the medical profession would be made known to Congress.

On the national level, the plan calls for the appointment in each state of a "key legislative man," this appointment to be made by the Board of Trustees of the A. M. A. Dr. M. Vaun Adams, Mobile, has been chosen to fill this position in Alabama. He will be directly responsible to the regional member of the A. M. A. Committee on Legislation.

The American Medical Association emphasizes three points regarding the responsibilities of the key legislative men of the various states. They state in part that they will:

1. Have a definite status with their fellow doctors at home when requesting action or aid—rather than seeming to be (as is now the case) a sort of self-appointed or informal enthusiast about legislation.
2. Insure a continuity of activity from year to year.
3. See to it that current state or county officers and any really effective key individuals, with or without formal status, are drawn into the legislative activity, used, and made to feel a part of the legislative team.

In accepting the appointment as key legislative man for Alabama, Dr. Adams has assumed a heavy responsibility. It will be his duty to make known to the national Com-

mittee on Legislation the views of the State Association members and to see that pertinent background material, collected and correlated within the A. M. A., is disseminated to the members of the Medical Association of the State of Alabama. He will need the support of every member and the help of many of the members of the State Association. Each individual is urged to cooperate with Dr. Adams to the very best of his ability when his services are needed. Your collective effort is needed to protect the interests of the public as well as the interests of the profession.

SPEAKERS BUREAU

The pamphlet "Your Doctor Speaks" has been prepared and is being distributed under the direction of the Speakers Bureau of the Association. Copies of the leaflet are being sent to such organizations as PTA groups, luncheon clubs, and civic clubs to aid program chairmen in presenting accurate, up-to-date and interesting information on health and medical subjects. More than fifty topics are listed, ranging from "Arthritis—Forms and Fallacies" to "Too Fat?"; from "Why We Have Prenatal Care" to "Our Aging Population," and from "Misuse of Antibiotics" to "Penalty of Success."

The Subcommittee on Speakers Bureau of the Committee on Medical Service and Public Relations outlined plans for activating the bureau last fall. Subsequently, each member of the Association was invited to participate; and each county society was requested to send to the state office a list of speakers and subjects. The response from individual members showed an active interest in such a program and supplied sufficient material for the committee to design and have published "Your Doctor Speaks." A future report will be made in the pages of the *Journal* when the speakers bureau has been in operation long enough for the program to be evaluated.



ASSOCIATION FORUM

(All provisions of PL 880 of the 2nd Session of the 84th Congress will be in effect on July 1, 1957. In the following pages, two phases of the Social Security program which are of immediate interest to physicians in Alabama are discussed: the provisions for payments of monthly disability benefits to individuals, and the provision for federal participation in the payment for medical care of the indigent.)

MEDICAL ASPECTS OF THE SOCIAL SECURITY DISABILITY PROVISIONS

By

Arthur B. Price, M. D., Chief,
Medical Consultant, Division of Disability
Operations, Bureau of Old-Age and
Survivor Insurance

Among every doctor's patients are some who become disabled and have to stop work before they reach 65 or die. In addition to the emotional problem of accepting and adjusting to their disabilities, most of these patients also must face the serious problem of their own and their families' financial security in the years ahead.

For almost two decades, the social security program did not take account of this problem of financial insecurity. Until as late as 1954, it was not uncommon for a worker whose working lifetime had been cut short by disability to reach 65 and find that the gap in his social security earnings record meant that he was entitled to only minimum benefit payments, or that his and his family's rights to payments had been lost entirely.

In 1954, the social security law was changed to permit a worker to "freeze" his social security record if he becomes totally disabled for any substantial gainful work. Further amendments to the law in 1956 provide for the payment of disability insurance benefits to totally disabled workers beginning at age 50. These disability insurance benefits are figured from the worker's social security account, the record of the

earnings upon which he and his employers have paid social security taxes. The 1956 amendments also make provision for the continuation of a disabled child's benefits past the age of 18.

Physicians in Alabama will want to have at least general information about these provisions, not only to help advise their disabled patients of their possible social security rights, but also because most of them will be asked to supply medical evidence for determining whether a particular worker's condition is serious enough to qualify him as "disabled" under the social security law.

Applications of disabled persons for benefits or for the "freeze" are taken by Social Security Administration district offices in communities all over the nation. These offices will give a disabled applicant information about his rights and obligations and will help him to file an application and to secure whatever proofs and documents he may need to support that application. They will not, however, make any evaluation of his disability. Determinations of disability are, in general, made by a State vocational rehabilitation agency or other appropriate State agency under an agreement between the Secretary of Health, Education, and Welfare, and each State. In Alabama, the State Vocational Rehabilitation Agency makes these disability determinations. This pattern of Federal-State operation means that skills and the established organization of the Alabama State agencies and the existing relationship between those agencies and the medical profession will be utilized.

Vocational Rehabilitation

One of the most significant features of the disability provisions in the social security law is the requirement that all applicants, whether for benefits or the "freeze," be referred promptly to their State vocational rehabilitation agencies to be considered for

possible vocational rehabilitation services. The VR agencies will thus be in a position to provide these handicapped people with appropriate medical and vocational counsel which may prevent more serious disability or restore working capacity. It has been said that one of the real measures of the success of the social security disability program will be the extent to which it helps to return disabled people to productive activity.

Applicants may not be paid disability benefits if they are offered VR services and refuse those services without good cause.

The "Freeze" Provision

Social security benefit payments to a worker or to his family are based upon his record of work in jobs or self-employment covered by the law, up until the time he reaches retirement age or dies. For the worker or for his family to be eligible for payments, he has to work under social security for a certain period of time. (The length of that period of time depends upon his age.) The amount of the benefits payable depends upon his average monthly earnings in that work.

The 1954 "freeze" provision permits a worker who becomes totally disabled for work before retirement age to apply to have his social security record frozen, so that the years when he is unable to work because of his disability will not be counted against him in determining his eligibility for benefits and the amount of those benefits.

Both his eligibility and the amount of benefits payable will be determined as though he reached 65 on the date his disability became so serious that he could no longer work.

A disabled worker may apply to have his social security record frozen as soon as he has been totally disabled for work for six months or more.

Disability Insurance Benefits at Age 50

Beginning with the month of July 1957, disabled workers between 50 and 65 years of age who meet the work and disability requirements specified in the social security law may be paid monthly disability insurance benefits. The amount of these monthly benefit payments will be the same as the amount of the old-age insurance benefit for which the worker would be eligible at age 65 with the advantage of the provision for

freezing his record of earnings; that is, his benefit amount will be figured as though he had reached 65 on the date his disability began. A worker's dependents do not receive any benefits based on his social security account while he is receiving his disability insurance benefits. However, benefits may be paid to his dependents when he becomes entitled to his old-age insurance benefits, or if he should die while he is receiving disability insurance benefits. (Disability insurance benefits are converted to old-age insurance benefits when the worker reaches age 65, although women workers can elect to receive reduced old-age insurance benefits after they reach 62.)

If a disabled worker is also entitled to a disability benefit under the program of another Federal agency, or under a State or Federal workmen's compensation law, his social security disability benefit will be reduced by the amount of that other benefit. No disability insurance benefits under the social security law are payable for the first six months of total disability, even though the worker may already be 50 years of age or older at the time his disability begins.

Benefits for Disabled Children 18 and Over

The 1956 amendments have made it possible for a new group of dependents—disabled children 18 years of age and older—to receive monthly benefits based on the earnings of a retired or deceased parent. Up until the effective date of this new provision, a child's old-age and survivors insurance benefits have stopped when he reached 18, whether or not he could ever be expected to become self-supporting. The "children" now eligible to receive benefits may be of any age if they are unmarried, became disabled before they were 18, and have remained totally disabled ever since. To qualify for these benefits, a child 18 or over must be determined to be totally disabled for work. The same criteria for determining disability and the same evidence requirements apply in the case of a disabled child as in the case of a disabled worker who is applying for disability insurance benefits or to have his social security record frozen. However, the child need not have any record of work under social security. The mother of a disabled child may also qualify for benefits of her own, if the child is in her care. Payments to disabled children and their mothers can start with the month of January 1957.

Work Requirements for the "Disability Freeze" and for Disability Benefits

In order to qualify for either disability insurance benefits at age 50, or to have his social security record frozen, a worker must have social security credit for at least 5 years of work in the 10 years before the onset of his disability, and at least 1½ years of this work must have been in the three years just before he became disabled.¹ In substance, he must have a social security record of some years standing, and one which shows that he was a part of the Nation's labor force right up to the time of his disability.

Who is Considered "Disabled" Under The Social Security Law

In the 1954 "freeze" provision, "disability" means an inability to engage in any substantial gainful activity by reason of any medically determinable impairment that can be expected to result in death or to be of long-continued and indefinite duration. "Blindness"² is the only type of disability for which the freeze statute provides a specific definition; a person who meets the test of blindness is disabled under the freeze law whether or not he is capable of gainful activity. Disability of persons suffering any impairment other than blindness will be determined on the basis of all the relevant facts in their cases.

Disability, as defined in the disability insurance payment provisions of 1956, is the same as in the 1954 "freeze" law *except* that blindness, standing alone, does not necessarily constitute disability regardless of its degree of severity. To be eligible for disability insurance benefits between the ages of 50 and 65, blind persons like those

with other physical impairments must be unable to engage in any substantially gainful activity.

To be determined "disabled" under the social security law, it will be noted, the individual must meet requirements that are different than in some other government and private disability programs. Eligibility is contingent upon an attachment to the labor force in the past (the individual's record of work under social security) and upon forced removal from that labor force (a present and continuing inability to engage in any substantial gainful work).

Because the definition of disability in this law is a special one, the fact that a disabled person may be receiving payments for "total disability" from another government agency, under a company disability retirement plan, or under a privately purchased insurance policy, does not necessarily mean that he will be considered "disabled" under the provisions of the social security law.

A person who is unemployed mainly because he can't find a job may not, under this law, be considered totally disabled, even if he does have some disability which makes it harder for him to find a job and hold it. Nor will he necessarily be considered totally disabled for work because he cannot do the type of work required in his last job or any jobs he has held in the past.

Many people *temporarily* prevented from following their usual occupations by disease or injury will be unable to qualify as "disabled" under the law because their impairments are not serious enough or sufficiently prolonged. But these people (as well as those who have permanent impairments) have the advantage of another provision in the social security law which permits the dropping out of up to five years of low (or no) earnings in the computation of benefits. This "drop-out" of five years can be made whether or not the reduction in earnings (or the lack of any earnings at all) is caused by a disability.

Obtaining Evidence of Disability

A disabled person, applying at his social security district office for disability insurance benefits, benefits as a disabled child, or to have his social security record frozen, is responsible for getting the medical evidence needed to show the extent and duration of his disability.

The applicant will be given one or more

1. Until 7-1-1961 the work requirements for disability insurance payments and the "freeze" are identical. Beginning 7-1-61 the disability insurance work requirements become progressively more restrictive until every disabled individual will need to have (in addition to other requirements) at least 10 years of social security credit.

2. Blindness is defined in the freeze law of 1954 as central visual acuity of 5/200 or less in the better eye with a correcting lens; an eye in which the visual field is reduced to 5 degrees or less of concentric contraction is considered to have a central visual acuity of 5/200 or less.

A person who is blind, as defined in the freeze provision, can establish a "disability" without consideration of the effect on his ability to work.

medical report forms which he is instructed to take or mail to his physician, and to any clinic, hospital, institution or agency where he has received treatment. These completed forms are to be returned by mail by the reporting physician or institution to the social security district office or to a State agency, as indicated.

The medical report form, which is patterned after the forms used by private insurance companies, is furnished for the convenience of the physician. On it, the physician is asked to supply information as to the medical history of the impairment, the clinical findings, and the prognosis. The use of the form itself is not mandatory and if he wishes a doctor may give the requested information in some other form. Any information a doctor gives is, of course, treated as confidential, and procedures have been set up to safeguard the highly confidential nature of all medical and allied reports.

The medical report, based upon an existing medical record or upon a current examination, will, if it is complete and factual, ordinarily be sufficient to establish the degree of severity of the applicant's disability. In some cases there will be a need for additional medical information and occasionally, an additional examination. The State agency which is responsible for making the determination of disability may need additional reports of diagnoses and clinical findings from existing records and will advise the applicant that he must secure these.

Where the initial medical report submitted by an applicant's physician fails to establish the severity of the impairment, the physician in the State agency may write directly to the applicant's physician for additional information. This approach has been adopted to preserve and strengthen the doctor-patient relationship. If the necessary information cannot be provided by the attending physician without a further examination, the applicant will be informed, and asked to arrange for such an examination. Since the law places upon the applicant the responsibility for furnishing supporting evidence, he is responsible for paying any basic costs involved. However, a medical examination at the expense of the Government may be authorized where, in the judgment of the reviewing physician in the State agency, it seems necessary to verify certain facts in order to insure that

an improper award will not be made.

How the Attending or Examining Physician Can Help

Ordinarily, a person so severely disabled as to qualify under the disability provisions in the social security law will be under the medical care of a physician or will have had a medical examination for his condition, and will take the medical report form given to him by his social security office to his physician. Normally, the medical reports are to be submitted directly to the Social Security Administration for transmittal to the State agency making the disability determination.

The report form calls for pertinent history, clinical findings and diagnosis. It is short, simple and flexible. Use of any other form, or a narrative statement, is acceptable so long as the necessary facts relating to pertinent history, symptomatology, clinical findings, etc., are given. In other words, all the findings which serve as the basis for your diagnosis and prognosis must be included.

Reporting physicians are not asked to decide whether the applicant is under a disability. Their responsibility, instead, is to give the State agency medical facts and findings sufficient for its physician to reach a conclusion as to diagnosis and the severity of the impairment.

Experience to date with the medical report form has been generally good, but some of the reports received contain insufficient medical findings to permit a reviewing physician to evaluate the extent and degree of the impairment. In such case, it is necessary to ask the reporting physician to describe more precisely his findings. Comments from practicing physicians are welcome. Their opinions are highly regarded and carefully considered.

How the State Agency Determines Disability

Determinations of disability are made with a "team" approach; that is, by a physician and a qualified counselor or lay person skilled in evaluating the effect of impairments on ability to work and versed in the other requirements of the social security law. In many States the physician member of the "review team" is in private practice and serves as a consultant to the State agency for purposes of making disability decisions. The role of the attending or ex-

aming physician in submitting the medical report is of paramount importance to the program, for it is on the basis of the clinical findings (i. e., clinical findings on which diagnoses are based as opposed to diagnostic or disability conclusions based on specific findings) and other medical evidence in the report that a determination of the severity of the impairment is made. By submitting accurate, specific reports, the physician can render assistance to the applicant and at the same time facilitate fair and proper disposition of the claim.

Medical Advisory Group

The Social Security Administration has enlisted the help of representatives of the medical profession in developing policies, guides and procedures involving medical aspects of the disability provisions in the law. A Medical Advisory Committee, whose membership represents a variety of specialized skills in medical practice and in public and private medical administration, was appointed in February 1955.³ The guides now followed by State agencies in making determinations of disability were developed with the help of the suggestions made by this group. These guides assure disabled workers equal treatment under the disability provisions, no matter in what part of the nation they live.

MEDICAL CARE OF THE INDIGENT IN 1957

The American Medical Association Committee on Indigent Care of the Council on Medical Service has again met with representatives of the Department of Health, Education, and Welfare, Bureau of Public Assistance, and has revised the preliminary draft of questions and answers which was issued in December 1956. Space limitations do not permit publishing the revised report in its entirety. However, some of the most pertinent questions and answers on the 1956

Amendments, which will become effective on July 1, 1957, will be of current interest to Alabama physicians who are helping to care for the indigent in their state.

1956 AMENDMENTS NEW FINANCING METHOD FOR MEDICAL CARE LEGISLATIVE BASIS

What effect do the 1956 amendments to the Social Security Act have on medical care for the indigent?

They establish a new *method of financing* medical care for clients of the four Public Assistance Programs,¹ distinct financially from the direct monetary assistance paid to the clients themselves. Each of the four PA programs is *separately* amended to allow the states to utilize this new method of financing to provide medical and "remedial" care for clients of that program, if the state so desires. The amendments, therefore, merely specify a new way of financing medical care; they do not establish a separate and distinct program of medical care.

What is the purpose of these amendments?

As stated in the amendments themselves (Title III, Sec. 300 Public Law 880, 84th Cong.), "It is the purpose of this title (a) to promote the health of the nation by assisting States to extend and broaden their provisions for meeting the costs of medical care for persons eligible for public assistance by providing for separate matching of assistance expenditures for medical care . . ." (Note: The term "medical care," as used in the law, does not mean physicians' care only.)

What effect does this new method have on current methods of financing indigent medical care?

When the new method goes into effect on July 1, 1957, any *vendor* payment,² to be eligible for federal reimbursement, must be made through this new system of financing. Public Assistance, so far as federal participation is concerned, will be divided into two accounts: direct money grants to recipients and vendor payments for medical care.

1. The four eligible categories are indicated by the program titles: Old Age Assistance, Aid to Dependent Children, Aid to the Blind, and Aid to the Permanently and Totally Disabled.

2. Direct payment by the state to physicians, hospitals, etc., the "vendors of medical care," is commonly known as "vendor payments for medical care."

3. The members are: Dr. J. Duffy Hancock, Chairman, Louisville, Kentucky; Miss Pearl Bierman, Chicago, Illinois; Dr. Philip D. Bonnet, Boston, Massachusetts; Dr. Donald Covalt, New York, New York; Dr. Charles L. Farrell, Pawtucket, Rhode Island; Dr. J. S. Felton, Oklahoma City, Oklahoma; Dr. Herman E. Hilleboe, Albany, New York; Dr. Lemuel C. McGee, Wilmington, Delaware; Dr. Kenneth E. McIntyre, Detroit, Michigan; Dr. William A. Pettit, Los Angeles, California; Dr. Leo Price, New York, New York; Dr. William Harold Scoins, Fort Wayne, Indiana; Carroll Shartle, Ph. D., Columbus, Ohio; Mr. Byron Smith, Minneapolis, Minnesota; Dr. David Wade, Austin, Texas.

What does the new matching method provide financially?

The new matching method provides that the federal government will reimburse the states for half the amount expended by the states for medical and "remedial" care, within the limits formulated in the amendments.

What limits on federal reimbursement are set by these amendments?

Federal participation applies only to an average monthly expenditure of \$6 per adult client and \$3 per dependent child. Thus, in calculating federal payment to the state, the federal share is half of any medical costs up to \$6 (or \$3) times the number of clients on the rolls during a given month. Any amount above this total expended on medical care in that month is not considered in determining the amount of federal aid.

The state may, however, establish or continue a pooled fund³ to equalize monthly fluctuations in medical care expenditures. Moneys paid into such a fund during a given month will be used (in calculating the federal reimbursement) to determine medical costs rather than the actual vendor payments during that month. If a state's monthly payment into its pooled fund was \$6 each for 200 OAA clients, the federal share would stabilize accordingly at \$600 per month. The rate of expenditure from the fund would not affect the federal reimbursement.

Does the size of the state's direct monetary grant to the recipient himself have any effect on these matching funds?

No, the matching formula for medical care is completely independent of the Public Assistance payments to individuals on assistance rolls, so far as federal reimbursement is concerned. The only correlations are: (1) In a given program, all those on the rolls of that program must also be eligible for the medical services provided; (2) the same agency is responsible for the

direct assistance and the medical care program.

ADMINISTRATION

Who establishes the medical care programs?

Inauguration of such programs is entirely a state responsibility. The Bureau of Public Assistance has published a *Handbook* listing specifications which have to be met for federal participation; however, the state must itself decide to establish such a program, submit program plans, make the necessary appropriations and submit accounts to the Bureau of Public Assistance. The federal government itself has no authority to initiate or organize these programs.

Who administers the programs?

The state must perform or supervise all administrative functions and must establish its own regulations. Once the program has been approved, the federal government requires only that one agency be responsible and report for all phases of a given Public Assistance program, and that separate accounts be presented for each Public Assistance program, in order that federal participation can be determined in accordance with the enabling legislation.

Who, therefore, determines what medical benefits are to be provided?

The state, except as limited by the specifications and standards issued by the federal government to the states as a guide in application for federal reimbursement.

MEDICAL BENEFITS

What medical care may be provided under this act, after July 1?

This is a matter for the individual state to decide. The main limitation is that the same benefits, within the limits of available facilities, should be provided to all members of a covered program throughout the state. That is, a state could not provide hospitalization for OAA clients in one part of the state and not in another.

Must payments be made in the same way throughout the state?

No; fee schedules may be varied to suit local conditions or the state may use a prepayment plan in one section and direct payment of physicians or hospitals in another section. Benefits to welfare clients must be uniform, but methods of payment need not be.

3. In the pooled fund system, the state establishes a separate fund, to be used only for payment of medical costs for clients of a given assistance program. Into this fund, the state makes a set payment monthly for each person on the rolls of the program during that month; from the fund, medical costs can be met for any client of that program, without regard to the amount paid into the fund per person. The fund may be used for any type of medical costs, as the state decides, limited only by the size of the fund.

Must the state set up medical care programs for all Public Assistance clients?

No; since the amendments are appended to the individual Public Assistance programs, the state may use this new matching method for one program, for all four, or for any combination of the four.

Can General Assistance clients or the medically indigent be covered?

No, since these types of indigents are not covered by the provisions of the Social Security Act.

Note: A person may have all the qualifications for coverage under a Public Assistance program (e. g., Old Age Assistance) except the necessary degree of indigency and, therefore, be ineligible for a direct money grant. However, in case of illness, he might become eligible for Public Assistance for medical care *only*, and thus would come under the provisions of the medical care programs as a Public Assistance recipient.

Does a state have to use this method of financing medical care for the indigent?

No; a state may use whatever method it chooses. However, to obtain federal aid, a program must come under the provisions of this "6-and-3" method, as it is sometimes known. Any other method must be financed wholly from nonfederal sources, except inclusion of money payments for medical care in the direct grant to the client himself.

Can a state make vendor payments from the individual client's basic grant?

No; under the new amendments, all money grants in the basic Public Assistance program must be made directly to the client without restriction to be eligible for federal reimbursement.

What type of medical benefits may be provided under this act?

The amendments specify that the federal government may reimburse the state for sums expended "in the form of medical or any other type of remedial care (including expenditures for insurance premiums for such care or the cost thereof)."

What does "medical care" include?

The range and variety of medical services to be provided is decided by the individual state for each program; it need not provide the same benefits in two different Public Assistance programs. The extent of services provided is usually governed by the funds available and the need. Among serv-

ices which can be provided are: physician's care in home, office, or hospital; hospital services; clinic or outpatient care; home nursing; convalescent and nursing home care; rehabilitation; drugs, prescriptions, and prosthetic appliances. Some states have even provided limited dental services, when a dental condition was adversely affecting the patient's health.

What is meant by "remedial" care?

"Remedial" care is used to indicate care by nonmedical practitioners, such as Christian Science healers, in such states as recognize these practitioners and include them in the state's indigent care program.

Must the state provide both physician and hospital services?

The state decides which services are to be provided as part of the Public Assistance Program, within the limits established in the *Handbook*.

SUMMARY

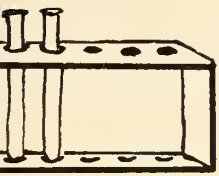
The Social Security Amendments of 1956 establish a new method of financing medical care for clients of the four Public Assistance programs.

In this system, the federal government pays half the amount spent for medical care of Public Assistance recipients by a state within a quarter, up to a maximum of \$6 per month per client average for adults and \$3 per month per client for children. Separate accounting is required for each Public Assistance program.

The same benefits must be provided for all clients within a given state program, but the methods of payment and fee schedules may differ in locally administered plans within the state. Plans are established and administered or supervised by state agencies, but each state's programs must meet the standards of the Bureau of Public Assistance of the Social Security Administration to be eligible for federal reimbursement. However, the Bureau plans to leave its regulations flexible, so that the states may use the new matching method to improve their provision of medical care for the indigent.

The new matching method is effective July 1, 1957.

Note: The Bureau of Public Assistance will continue to formulate new regulations and make policy decisions concerning this matching method; further changes may be made. However, the preceding analysis is accurate insofar as essential information is available at present.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

YOU AND YOUR BLOOD PRESSURE

Have you ever wondered why the briefest, most routine physical examination includes a measurement of blood pressure? There is a very good reason for it. The blood pressure test is one of modern medicine's most efficient detectives. It gives a check on the circulatory system. It can indicate disease of the heart, kidneys, or other body organs. It can point out improper gland functioning. One writer has said that it is perhaps the most fundamental of all medical tests.

Blood pressure is the force with which the blood is propelled through the arteries. The heart must pump blood to the lungs for oxygen. It must also pump the blood, carrying life-sustaining oxygen, to all the body tissues. As it is pumping, the heart alternately contracts and relaxes. The pressure then varies. The maximum pressure is reached when the heart contracts, the minimum when it relaxes. The maximum is called the systolic pressure, the minimum being the diastolic pressure. Your doctor measures both. He records your blood pressure as one figure written over another, 120 over 70 for example. These figures express in millimeters the height to which the pressure in the blood vessels will raise a column of mercury or other fluid. The upper figure, the 120 of our example, is the maximum or systolic pressure. The lower figure, 70, is the minimum or diastolic pressure. Most of us use the maximum figure when we speak of our blood pressure. Actually, the doctor is more concerned with the minimum or diastolic pressure. It tells him how hard the heart must work when it is relaxed—getting its only rest. As one writer puts it, it measures the quality of the rest.

Normal blood pressure is hard to define. One reason is that a given individual's blood pressure will vary from time to time. That is why your doctor makes more than one

measurement. Many factors have a bearing on the level of the blood pressure. It is affected by exercise. If you run up the stairs to the doctor's office, your blood pressure will probably be higher than if you ride the elevator. Emotion can raise the pressure. Fear of the blood pressure test itself, for example, may result in a high reading. Our pressure goes up at mealtime and falls when we're sleepy.

When we consider that one person's blood pressure is not always exactly the same, it's easier to see why it varies from individual to individual. We often hear it said that no two people are exactly alike. This saying may be applied to blood pressure as well as to other characteristics. What is high blood pressure for your neighbor may be normal blood pressure for you.

There are limits, perhaps somewhat arbitrary ones, which are considered to be within the range of normal, but these limits must always be applied within terms of the individual concerned. Your bodily build may be a controlling factor. In general, fat people tend to have higher pressure than thin ones. Heredity may enter the picture. Some studies indicate that high blood pressure may tend to run in families. Age may be a factor. Blood pressure seems to show a tendency to rise as one gets older. In children the maximum pressure usually ranges between 75 and 100, in young adults from 100 to 120, and in older people from 120 to 140. There are, however, cases on record of infants with much higher blood pressure than the normal range, and some of them are perfectly healthy babies. Again, there are old people whose blood pressure is about what it was in young adulthood. The thing to remember is that "normal" means what is normal for you.

Low blood pressure is even harder to define. A low pressure in itself is seldom a cause for alarm. As long as the pressure is able to maintain the flow of blood to the brain and to meet the other demands of circulation it is probably high enough, no matter what the figures say. There are very few diseases which cause low blood pressure. Generally, when a pressure is low,

and there are other symptoms, such as dizziness and fainting, the cause can be found and perhaps corrected. Anemia, or malnutrition, for instance may be the villain. Most of the time, however, those of us who have low blood pressure without other symptoms can consider ourselves fortunate. It seems to predispose us to a long and healthy life. One physician has a saying that "To say one is suffering from low blood pressure is like saying that one is suffering from good luck!"

What about high blood pressure? Setting aside the normal fluctuations, blood pressure that is persistently high is usually a warning that something is wrong in the body. There are some cases of high blood pressure which cannot be traced to a specific disorder, and they are apparently increasing in number. This is called essential hypertension. Essential means the high blood pressure has no discernible cause. There is another type of high blood pressure which is called malignant hypertension. The onslaught is usually somewhat abrupt, and extensive kidney damage is a result. Fortunately this type is comparatively rare. And ordinarily, high blood pressure is a symptom, not a disease.

Then why is high blood pressure itself dangerous? Because it can cause hardening or scarring of the artery walls. The scarring finally leads to closing of the arteries. As they close, the tissues become weak and change to scar tissue, checking the flow of blood. Such hardening or scarring of the arteries is called arteriosclerosis. The hardening reduces the blood supply to body tissues, causing serious damage. It seems to work in a vicious circle. The high blood pressure produces the scarring. Because of the scarring and narrowing the heart must work harder to pump blood through, and when the heart works harder the blood pressure goes up.

Hardening of the arteries is most dangerous to three vital organs of the body: the heart, the brain, and the kidneys. If the heart's blood supply is cut off, coronary thrombosis—what we usually call a heart attack—may result. If the flow of blood to the brain is interrupted, and blood carrying vessels in the brain rupture or are blocked by a clot, the result is commonly called a "stroke," and paralysis may occur. If the kidney's arteries become scarred and narrow, the efficiency of the kidneys as

waste removers is impaired. Severe damage may permit poisons to enter the blood stream and cause a toxic condition known as uremia.

The extensive damage which arteriosclerosis can cause explains why high blood pressure is a cause for real concern. Hypertension with heart disease takes a heavy toll of lives each year. And statistics reveal that many persons die of hypertension without mention of heart disease. There were 370 such deaths in Alabama in 1953.

Fortunately, however, there is a brighter side to the picture. Not every person who suffers from high blood pressure develops arteriosclerosis. Among those who do develop it, the degree and intensity differ. Some patients show no ill effects for years. Many of them lead completely normal lives.

Another bright spot is that specific means of combating high blood pressure may soon be available. A few years ago there was not much the physician could do to correct high blood pressure. (Indeed, he had no way to measure blood pressure externally until 1898.) Diet and rest were about the only measures he could recommend and they were not always effective. In cases of malignant hypertension he might have recommended surgery, but such surgery sometimes gave poor results. Diet, rest, and surgery may still be recommended today. Increased knowledge of nutrition gives promise that dietary measures will successfully control some cases of high blood pressure. Salt-free diets, for example, are effective in some cases. Elimination of animal fats may be a means of checking hardening of arteries. Refined techniques of surgery mean the results of such treatment may be more encouraging than they were in the past. Psychotherapy has been tried with some success. And there are drugs which often are effective. The "tranquilizing" drugs which we hear so much about today may offer promise of aid to the sufferer from high blood pressure.

The kind of treatment a patient needs is something that can be decided only by his doctor. It cannot be emphasized too strongly that every victim of high blood pressure should be under the care of a physician, even though his high blood pressure may require no treatment. Treatment must vary to fit the patient, and the physician is the only person who can determine what treatment best fits a particular individual.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 26

June 1957

No. 12

SYMPTOMATIC DIVERTICULUM OF THE STOMACH

A CASE REPORT

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It is of interest to note that diverticula of the stomach have been recognized for almost 300 years, the first case having been described by Moebius in 1661. Case reports of this condition since that time have been relatively infrequent, the reported incidence varying between .015 and 0.3%,^{1,2,3} based on roentgenologic, surgical, and postmortem studies. The exact frequency is difficult to ascertain, however, since many diverticula are undoubtedly not discovered. The disease may be found in persons of any age, but most cases occur in persons of middle age, with females predominating in a ratio of about 2 to 1. Approximately 65% of all gastric diverticula are found near the lesser curvature and are located on the posterior wall of the cardia of the stomach. Gastric diverticula are of two types. The true or congenital diverticulum is characterized by the presence of all the coats of the stomach within the wall of the sac and the absence of gastric or extra-gastric disease which could produce a false diverticulum. In the false or acquired diverticulum all layers are present but thinning has occurred, and there is evidence that some disease was responsible for the sacculation.

Symptomatology. The frequency of symptoms attributed to gastric diverticula and, in general, to diverticula of the upper gastrointestinal tract, exclusive of the cervical

esophagus and Meckel's diverticulum, is considered low. Due to a dependent position and relative immobility, symptoms from duodenal diverticula occur much more often than those of the stomach, the estimated incidence being about 10%.⁴ When symptoms are due to gastric diverticula, they are usually attributed to independent lesions in the esophagus, stomach, duodenum, or gallbladder and are not characteristic. Epigastric pain is the most common complaint and there is frequent radiation to the lower retrosternal region. Vomiting is the second most frequent symptom and may occur in the form of massive hematemesis. Dysphagia is usually present, but to a slight extent. Pressure sensations are occasionally experienced by the patient, which can be relieved by change of position.

Morphology. Diverticula of the stomach may occasionally be multiple or multiloculated, but the majority occur as single sacculations. The sacculation may be of any size and communicate with the stomach through any opening which may vary from a few millimeters to several centimeters in width.

Diagnosis. Visualization of the sac by x-ray is essential to the clinical diagnosis of gastric diverticula. Usually a large fleck of barium is seen to persist on the 6-hour film after barium swallow. With variations in filling, the sac changes in contour and may show an air-fluid level. If the diverticulum is congenital in nature, it is most

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1. Harley, J.: Diverticulum of the Stomach, J. Irish M. A. 36: 106, 1955.

2. Price, E. A.: Gastric Diverticula, South African M. J. 29: 153, 1955.

3. Bockus, Henry L.: Gastroenterology, W. B. Saunders Co., Philadelphia, 1946.

4. Whiting, James A.; Wallace, Furman T., and Wilson, Richard S.: Diverticula of the Fourth Portion of the Duodenum, Am. J. Surg. 86: 233, 1953.

frequently seen arising near the lesser curvature from the posterior aspect of the cardia. The mucosa is normal in appearance. The presence of a sac in another region of the stomach other than the cardia should arouse suspicion of an associated lesion of the stomach, such as peptic ulceration, malignancy, or perigastric inflammatory disease. Diverticula of the stomach may also be observed gastroscopically, this procedure being of aid in the demonstration of an organic lesion which may accompany a false diverticulum. Surgical excision of this condition is indicated only when the lesion is accompanied by gross hemorrhage, impending perforation, marked peridiverticulitis, or malignancy. Asymptomatic or mildly symptomatic diverticula rarely require surgical intervention. Medical treatment includes frequent small feedings of a convalescent ulcer diet, postural drainage, and antispasmodics. In patients with marked symptoms which have failed to respond to medical treatment, surgical excision is also recommended. In the past, lasting benefits of removal have been denied many patients because of the technical difficulties associated with surgery. With recent advances and a better understanding of physiology and anesthesia, surgical cures may be obtained more safely. The following report is an example of a surgically treated symptomatic diverticulum of the stomach.

CASE REPORT

E. C., a 54-year-old white female, was admitted to the Fort Bragg Army Hospital on April 13, 1955 with a chief complaint of intermittent epigastric pain accompanied by nausea and occasional vomiting for a period of three years. During this time the patient had frequently received conservative treatment in the form of antispasmodics, antacids, and sedatives from various physicians. Since Jan. 1, 1955 the pain had become almost constant in nature and was accompanied by intolerance to fatty foods, onions and cabbage. In addition, sensations of pressure in the epigastrium when lying on her left side, which were relieved upon assuming a prone position, were present. A weight loss of approximately 10 pounds was also observed, which the patient attributed to poor appetite. Twenty four hours prior to admission, there had been vomiting and pain in the right upper quadrant and epigastric region.

A hysterectomy and right oophorectomy

had been done in March 1951. She also reported that she injured her knees in a fall two weeks prior to this admission and that some pain and swelling persisted.

Physical examination on admission revealed a pale, somewhat anxious appearing white female, older, seemingly, than her stated age of 54. She registered a temperature of 99.6 degrees F., a pulse of 80, and respiration of 16. The blood pressure was 140/90. The head, neck, eyes, ears, nose and throat revealed no pathology and the heart and lungs were also negative. Examination of the abdomen revealed tenderness to palpation in the mid-epigastric region and right upper quadrant with slight rebound tenderness. No masses, rigidity or distention were noted and, except for slight tenderness in both knees, the physical examination was otherwise negative.

The admission WBC was 5,600 with a differential of 64 polymorphonuclear leukocytes, 32 lymphocytes, 2 eosinophils and 1 basophil. The RBC was 3,450,000 and the hemoglobin, 12.2 gm. The urinalysis and serology were negative on admission. On April 14, 1955, a total protein of 7.72 with an AG ratio of 0.55 was reported. A van den Bergh test on this same date was within normal limits. A cephalin flocculation test, a



Fig. 1(a). Symptomatic Diverticulum of the Stomach. A Case Report.



Fig. 1(b). Symptomatic Diverticulum of the Stomach. A Case Report.



Fig. 2. Symptomatic Diverticulum of the Stomach. A Case Report.

prothrombin time, and the cholesterol and cholesterol esters were all reported to be normal on April 15, 1955. A gallbladder series was obtained on April 13 and reported to be normal in concentration and function. A gastro-intestinal series was performed on April 22, 1955, and the following observations were made: "There is a large $3\frac{1}{2}$ by 4 cm. diverticulum in the lesser curvature of the stomach approximately 2 cm. below the cardia." (See figure 1, a and b.) "The diverticulum contains both air and a small amount of barium. The diverticulum appears connected to the stomach by a 1 cm. pedicle. . . ." ". . . At 4 hours, most of the barium which had entered the gastric diverticulum appeared to be in the diverticulum. No associated pathology was noted." (See figure 2.)

In view of the persistence of the patient's symptoms, in spite of repeated conservative therapy, operation was recommended. On April 29, 1955 the patient underwent excision of the gastric diverticulum without difficulty. It was noted at operation that instead of a narrow pedicle a communication of the sac with the stomach was present which measured approximately $2\frac{1}{2}$ cm. in diameter. Postoperatively, the patient's course was uneventful and she was discharged in good condition on May 12, 1955. The pathologic diagnosis was "Diverticulum containing normal gastric wall and showing no particular pathology."

The patient has been followed for approximately eight months. In this time she has been completely free of pain and other symptoms attributed to her diverticulum.

DISCUSSION

There are several surgical approaches for congenital diverticula, which are most often located in the posterior cardiac region of the stomach. An abdominal, a left transthoracic, or a thoraco-abdominal incision may be used. Casberg⁵ used an abdominal midline incision and found satisfactory exposure by approaching the diverticulum through the lesser omentum and the greater curvature of the stomach. Clough and Speare⁶ feel that a left transthoracic approach through the bed of the 8th rib gives the most satisfactory exposure. A case of a true trilobular diverticulum in the cardiac

5. Casberg, M. A., and Martin, W. P.: Gastric Diverticula, *Am. J. Surg.* 76: 172, 1948.

6. Clough, D. M., and Speare, A. Z.: Surgical Treatment of Gastric Diverticula, *Am. Surg.* 20: 1273, Dec. 1954.

region was reported by Michel⁷ and associates, who used a thoraco-abdominal incision for removal of the sac. In the case presented, a right midline abdominal incision of the Clute type was used since the x-ray had revealed the diverticulum to present from the lesser curvature of the stomach into the gastrohepatic omentum. Diverticula in this area are technically less difficult to remove than those in the posterior cardiac region. It is probable that for most congenital diverticula a left trans-thoracic approach is the most satisfactory.

Whatever the incision, exposure must be satisfactory. For diverticula presenting into the gastrohepatic omentum, the approach is superior to the left gastric vessels, and by means of blunt and sharp dissection the sac is exposed. Traction sutures of silk are placed superiorly and inferiorly to outline the limits of resection. The area is then packed off with lap sponges, the diverticulum is excised and the gastric contents suctioned off. The defect is closed by means of a running gastro-intestinal chromic catgut suture of fine caliber and this is placed in such a manner as to invert the walls of the stomach. The serosa is then approximated by means of interrupted sutures of fine silk. No attempt is made to close the defect in the gastrohepatic omentum and the abdomen is closed without drainage. Postoperatively the patient is placed on nasogastric suction, antibiotics, and intravenous fluids for a period of 3 to 4 days. The patient is then allowed food by mouth and is ambulated. The patient is usually discharged within two weeks following surgery.

Aside from definite complications, such as perforation and hemorrhage, symptoms from gastric diverticula are no doubt due to the increased pressure on neighboring organs and tissues, especially if the diverticulum is of the pulsion type. These pressure sensations and symptoms are attributed to the dependent position of the sac and to the retention of gastric material within it. The decision to recommend surgery in uncomplicated cases of congenital diverticula rests upon the surgeon's appraisal as to the extent of suffering and disability experienced by the patient. Psychiatric consultation is often of aid in properly evaluating these pa-

tients. It is the author's opinion that surgery is indicated in those cases in which considerable discomfort is present, provided other organic cause for symptoms is ruled out.

SUMMARY AND CONCLUSIONS

1. A case report of a symptomatic congenital gastric diverticulum which was surgically treated has been presented.

2. Certain clinical aspects of this condition were discussed.

3. It is the opinion of the author that lesions of this type should be excised surgically if associated with severe complications. Surgery is also indicated in those cases in which severe discomfort persists in spite of adequate medical therapy, provided other organic cause for symptoms can be ruled out.

708-709 Van Antwerp Building.

Gin and Tonic, Cashew Nuts Cause Skin Reactions—"New drugs, new eruptions" has long been an adage of dermatologists. Now it seems necessary to add to it: "New drinks, new eruptions," and maybe even, "New travels, new eruptions."

Two unusual cases of skin sensitivity—one to the recently popular drink, gin and tonic, and the other to unroasted cashew nuts found in the tropics—have been reported.

The reports were made in letters to the editor of the *Journal of the American Medical Association*.

Drs. Frederick G. Novy, Jr. and Gordon R. Lamb, Oakland, Calif., told of a patient who developed a severe reaction after drinking gin and tonic (quinine water) because of his sensitivity to quinine.

They said that such sensitivity may produce headache, tinnitus, deafness, dizziness, visual impairment, fever, nausea, vomiting, and, most commonly, skin eruptions.

Their patient knew he was sensitive to quinine and usually avoided drinking quinine water. However, he attended a party at which only gin and tonic was served and, in the course of three hours, had several drinks. The doctors estimated that he consumed only about 45 milligrams of quinine, yet he developed a severe reaction—eruptions, redness, and swelling occurred all over his body within 24 hours.

At the end of 16 days, including six in the hospital, the eruption had cleared except for a few spots on his hands and feet. Treatment included aluminum acetate solution dressings, corticotrophin, and trepellenamine citrate.

The case of cashew nut sensitivity was seen by Drs. Carroll S. Wright and Donald N. Tschan, Temple University Medical Center, Philadelphia. They reported it to the *Journal* because Americans traveling abroad may develop the eruption, "one that is scarcely mentioned in the textbooks."

7. Michel, M. L., Jr., and Williams, W. T.: Trilobular Gastric Diverticulum Treated by Surgical Extirpation Through Thoraco-Abdominal Incision, *Am. Surg.* 132: 273, 1950.

PRINCIPLES FOR INITIAL TREATMENT OF EXTREMITY WOUNDS

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and

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The initial treatment of severe extremity injuries frequently determines the end result to a greater extent than does later reconstructive surgery. Since the former usually is in the hands of surgeons other than orthopaedic, certain basic principles are reemphasized. The cases cited represent mistakes we have made, together with others of a type which tend to congregate in hospitals as a result of the long periods of hospitalization required. No considered plan of late management, reparative or reconstructive surgery will be given here, except as it enters into initial stabilization of fractures.

EMERGENCY MANAGEMENT

Compound fractures of the extremities are frequently associated with hemorrhage of varying extent. Since hemorrhage, next to respiratory obstruction, poses the most immediate threat to the patient's life, first attention must be directed to its control. Pressure directly over the wound remains the basic principle of emergency control of bleeding. This is more easily and efficiently done by the hand over a sterile pad. The use of tourniquets is, in general, to be condemned, unless it is the only way to control the hemorrhage, as is rarely the case, or when pneumatic tourniquets are available. Sterile packs within the wound, supported by a snug dressing, are usually sufficient. If a tourniquet is used, it should be removed

as soon as possible. Loosening of the tourniquet every 10 to 15 minutes is not recommended. The compound wound should be covered with sterile dressings to prevent further contamination.

Shock should be treated immediately. *In the absence of head injury*, analgesia in the form of morphine should be given as soon as hemorrhage and shock are controlled. Fresh or recently preserved whole blood is the fluid of choice to replace blood lost in hemorrhage. In the absence of whole blood, Dextran and plasma may be used satisfactorily until blood is available. If these are not at hand, 5% glucose, normal saline, or mixtures of electrolytic fluids are indicated.

Splinting of the involved extremity is an early responsibility to prevent further damage and contamination and to reduce pain and shock.

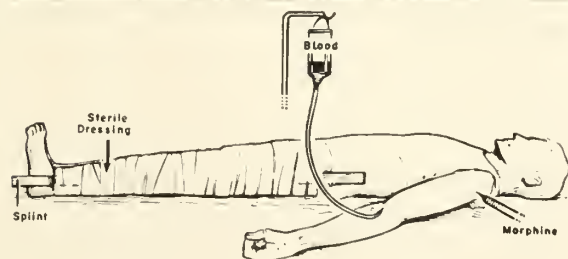


Fig. I. "Sheet Anchors" for extremity trauma: splint, transfuse and sedate (if there is no head injury).

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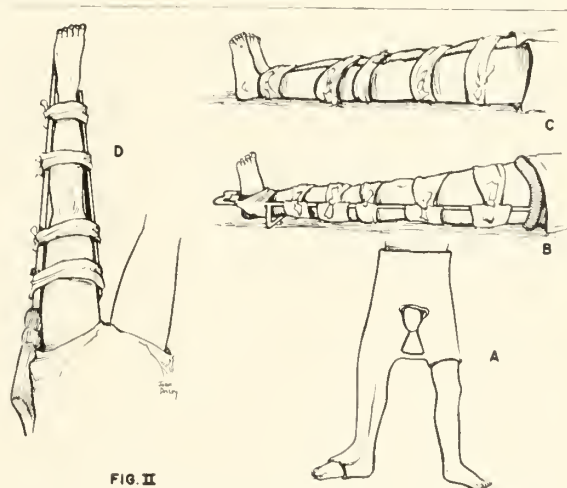


FIG. II

Fig. II. Temporary immobilization of lower extremity injuries.

- One and one-half body spica—bivalve for swelling or traveling.
- Thomas splint is the universal splint.
- One extremity may be bound to the other.
- Brooms, boards, guns, limbs of trees.

Certain make-shift splints, such as boards, pillows, or magazines, may be used if necessary. The Thomas splint is the most versatile tool for immobilizing a fracture of the

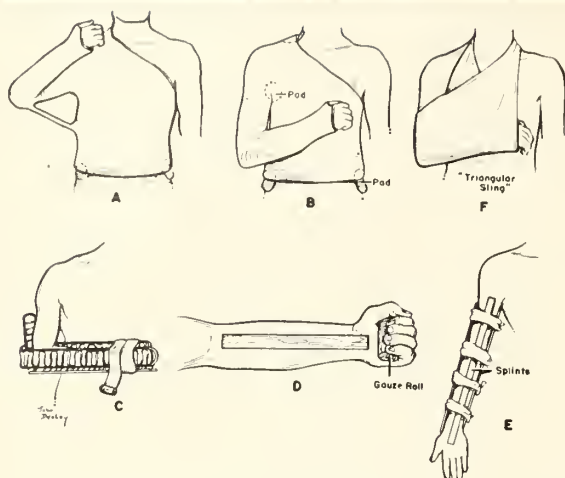


Fig. III. Temporary immobilization for upper extremity injuries.

- A. & B. Upper extremity spica; the upper extremity may be placed by slide in Velpeau fashion where traveling via stretcher is anticipated.
- C. Wire ladder or light chicken wire for hand and forearm injury.
- D. Emergency hand splint, padded board or magazine.
- E. Board or newspapers used as temporary splint.
- F. Triangular sling is a good immobilization so long as patient is walking.

leg, thigh, or hip. The Velpeau or long arm cast is valuable for fractures of the upper extremity. Careful examination of the patient before transportation is essential to discover spinal, head, thoracic or abdominal injuries.

INITIAL WOUND SURGERY

Despite antibiotics, initial surgery should still be done within the "golden six hours" at the nearest hospital having operating room, anesthesia and other facilities.

Preoperative preparation is directed at having the patient in the best possible condition. The only contraindications to immediate debridement are, in general, those conditions which demand care to save the patient's life, such as depressed fractures of the skull; intrathoracic conditions such as hemothorax, tension pneumothorax, cardiac tamponade; and severe intra-abdominal injuries such as ruptured viscus or hemorrhage. Top priority must, of course, be given to those injuries which threaten life. However, all too frequently, total attention is directed towards the more serious injury, ignoring the extremity wound until

the limb is lost from gangrene, osteomyelitis, etc. Most of these more important conditions require surgery themselves. It is, therefore, usually practical for another team to do the debridement while the more serious condition is dealt with, without prolonging the anesthesia time. In the other cases, such as head injuries, a fairly complete debridement is possible under local anesthesia without moving the patient. Without these relative contraindications, all compound wounds should be thoroughly debrided initially. The objects of such debridement are to remove all contaminating foreign bodies and dead tissue, secure hemostasis and prevent further tissue damage.

In extremities, a pneumatic tourniquet is valuable, as a dry field allows better visualization of important structures, such as nerves, tendons, etc. The only contraindications to its use are: (a) a limb whose circulation is borderline, such as advanced atherosclerosis, frost-bite, or Burger's disease, and (b) those cases with extensive concussion of the vascular system, predisposing to arterial spasm and venous thrombosis, such as high momentum missile wounds.

The open wound is thoroughly irrigated and packed with sterile gauze. The surrounding skin is then prepared as for an elective orthopaedic procedure. Incisions are made through healthy tissue completely around the isolated contaminated wound. Elliptical wounds are closed, in general, with the long axis to that of the limb, the exceptions being over joint surfaces where the skin creases are followed.

If the wound is to be extended for exploration, as it should be with major vascular wounds, such extension should be done so as to avoid a cruciate scar (see diagram), converting the incision into a linear or bayonet one. The entire wound is excised en bloc, removing small contaminated bone fragments free of soft tissue connection. Fragments large enough to participate in the maintenance of length, and all fragments with healthy soft tissue attachments are left in after being cleaned. Hemostasis is secured with small ties, accurately placed on the vessel ends. No attempt to remove buried bullets is made, although contaminated material such as clothing, twigs, etc. is removed. *In close-range shotgun wounds, particular attention must be directed towards finding and removing the wadding.*

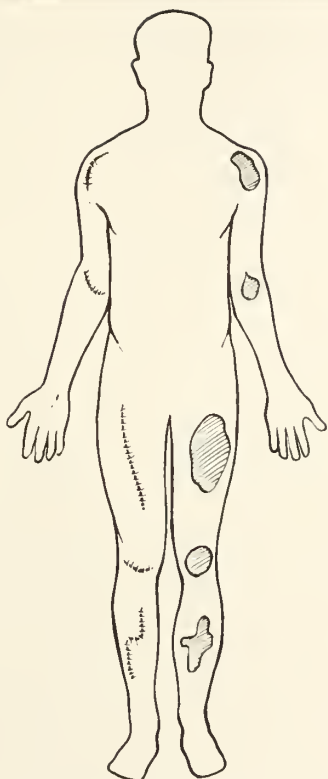


Fig. IV. Closure of wounds follow "Skin Lines" for inconspicuous scars.

After irrigation, the skin is then closed or the wound draped with vaseline gauze. The gauze is applied in radial strips extending over healthy skin, wound edges, and across the crater of the wound.

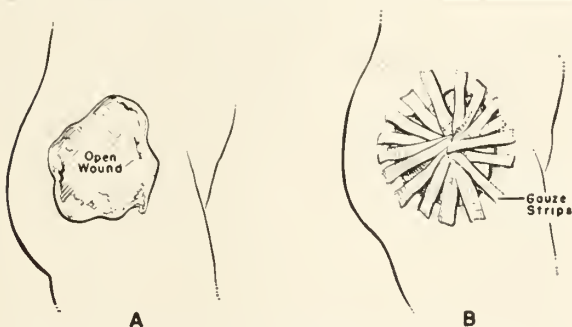


Fig. V. A wound is "draped" with vaseline or fine mesh gauze, not "stuffed like a turkey."

After the wound is covered in this manner, the cavity is lightly packed and a dry sterile dressing applied. The extremity should then be immobilized, either by casting, skeletal traction, or cross-pin fixation. Early systemic antibiotic therapy is indicated, preferably with a mixture which is effective against both Gram-negative and

Gram-positive organisms. The use of tetanus toxoid or antitoxin (depending on past immunizations) or gangrene antitoxins may be indicated, particularly from a medico-legal viewpoint.

JOINTS

Wounds into joints form a special problem. Thorough debridement as above is essential, but destruction of articular surfaces, capsule and synovia is kept to a minimum. The capsule and synovia are closed in all cases if at all possible. Penicillin aqueous, 0.5-2.0 million units, is instilled into the joint space. Depending on the wound and degree of tissue contamination and destruction, the other soft tissues are closed in layers, or packed open, as above. Usually, it is advisable to pack the wound open with vaseline and close secondarily in four to six days. All cases should have massive systemic antibiotic administration. All joint injuries, regardless of the lack of bony damage, should be completely immobilized primarily, usually with plaster. Occasionally, the degree of bony damage indicates skeletal traction. Injuries to certain areas pose peculiar problems. Therefore, specific areas will be briefly mentioned.

FRACTURES OF THE FEMUR

Fractures of the femur pose a threat to the patient's life because of the serious shock which usually accompanies them. One thousand cubic centimeters of blood can easily be present in the extravascular spaces of the thigh. Because of this, careful pre-operative preparation is essential. The extremity should be placed in traction initially. Shock is generally improved by immobilization alone. Fluids are given, including adequate whole blood and electrolyte solutions. Analgesics are recommended. After immobilization, such as in a Thomas splint, the pulse, respiration and blood pressure should be within normal limits for thirty to sixty minutes before debridement. The exception to this is in major vascular injuries where immediate surgery is indicated. Blood should be available in large amounts and given while the preparation and initial induction of anesthesia are done. After thorough debridement according to the previously discussed principles, definitive traction through the tibial tuberosity or lower femoral region is started. Skeletal traction through the lower end of the femur, just above the condyles, is of value in fractures in the upper one-third of

the femur. However, with other femoral fractures, or when later open reduction is contemplated, traction through the tibia is desirable. The pin is passed through the center of the tibia just below the tibial tuberosity, taking due care to avoid the peroneal nerve. Such skeletal traction is the treatment of choice in compound fractures of the femur. The initial use of internal fixation, such as intramedullary nails, screws, or wires is to be strongly condemned. If transportation is necessary, the use of a plaster body spica is generally indicated. However, for short civilian ambulance trips, the line from the skeletal traction bow may be secured to the end of the Thomas splint and the leg wrapped in the splint with "Ace" bandages. High velocity missile wounds involving the femur, but with no evidence of vascular involvement, are treated by placing a small sterile dressing over the wounds and by the application of skeletal traction. Unless foreign material, other than the bullet, has entered the leg, no further initial operative therapy is indicated. Shotgun wounds from close range demand exposure and removal of wadding and devitalized tissue, regardless of the time since injury.

Case I—J. B., a 33-year-old white male was admitted on March 31, 1954, six days after sustaining an injury to his lower ex-

tremities while unloading pipe from a truck. At another hospital, due to the extent of the injury, a left supracondylar femoral amputation and right femoral debridement and closure were performed. Upon admission to this hospital, a Kirschner wire was inserted in the proximal end of the right tibia and then placed in balanced traction. On April 21, 1954 a Hansen-Street nail was inserted in the right femur. The stump of the left thigh had completely healed. The course in the hospital was uneventful, and the patient was discharged seven weeks after admission to be followed as an out patient.

FRACTURES OF THE TIBIA

Since the tibia lies subcutaneously throughout most of its extent, compound fractures are very common in this region. Due to the lack of soft tissue surrounding the bone, poor blood supply through its middle two-thirds, and its subcutaneous location, non-union, osteomyelitis, and breakdown of the wound are to be anticipated. The initial debridement is carried out as previously described. In transverse fractures there is little muscle pull producing

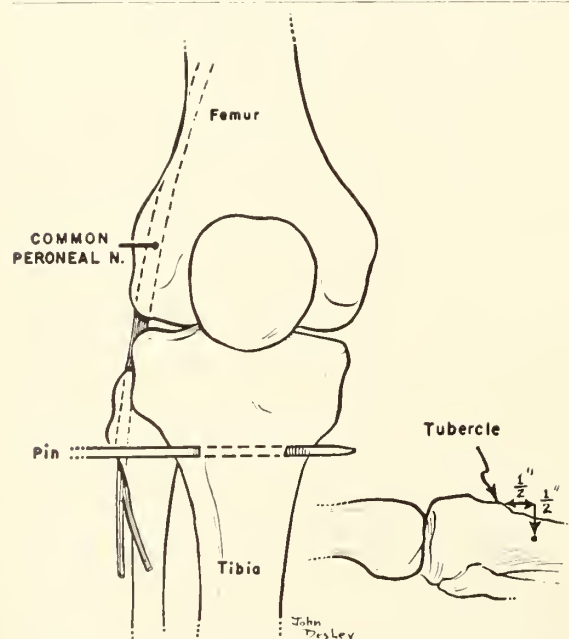


Fig. VI. Tibial traction $\frac{1}{2}$ " distal and $\frac{1}{2}$ " posterior to tibial tubercle, the site of choice for temporary traction for femur; later femoral condyle may be applied if indicated.



CROSS PIN FIXATION

Fig. VII. Cross-pin fixation above and below fracture site and subsequent incorporation in plaster. This method preserves length with fair position. The dangers of ladder of infection and ring sequestra are grossly overrated.

shortening and angulation, and immobilization in plaster is usually sufficient. In oblique fractures there is a tendency to lose the reduction, and fixation by transverse Steinmann pins, which can be passed through both the tibia and fibula in the lower one-third and through the tibia in the upper one-half, and incorporation of these pins in a long leg plaster cast after reduction, is usually successful. The danger of pin tract osteomyelitis has been grossly exaggerated. The initial use of any internal fixation at the fracture site is an invitation to disaster.

The use of skeletal traction through the distal tibia and fibula and a long leg cast are usually satisfactory, although excessive traction must be avoided. Calcaneal traction is rarely used due to the high incidence of the serious complication of calcaneal osteomyelitis. Postoperatively, massive systemic antibiotics, the choice of which is determined by culture and sensitivity tests on the exudates, are indicated. Elevation with dependent drainage is desired.

Case II.—D. B., a 57-year-old white male was admitted to the hospital some eight hours after having been struck down by an automobile while walking across the street. When first seen in the emergency ward, he was obviously in shock, being cold and clammy, sweating, with a rapid thready pulse and unobtainable blood pressure. He had lost a relatively small amount of blood from numerous superficial abrasions and small lacerations. Both tibiae were obviously fractured, the left at the junction of the proximal and middle thirds, as well as in the distal third; the right in the distal third. A venous cut-down was done immediately and whole blood started. Both legs were placed in Thomas splints. The patient responded satisfactorily to 1000 cc. of whole blood and splinting of legs. X-rays confirmed clinical observation—a segmental fracture of the left tibia with simple fracture of the fibula in mid-shaft; a comminuted fracture of the distal third of the right tibia, with simple fracture of the right fibula in the distal third. On the day following admission, with the patient under anesthesia, transverse Steinmann pins were placed through the proximal and distal fragments of the left tibia, and the extremity, with the pins, was incorporated in a plaster cast. The fracture of the right tibia remained in good

position and alignment and was merely incorporated in a long leg cast without pins. X-rays at two weeks showed that the fragments had slipped. The right leg was reduced and immobilized, using Steinmann pins through the tibia transversely above and below the fracture. The pins were removed from both extremities after three months. X-rays made four months after injury showed early healing of all fractures with good length and alignment.

Case III.—A. J., a 38-year-old colored male was admitted on December 25, 1953 shortly after receiving a point-blank shotgun wound which resulted in a compound comminuted fracture of the left humerus and damage to the brachial vessels and nerves. The extremity was cold, rigid and pulseless. He was taken to the operating room where a five centimeter segment of humerus was found to be missing. The ulnar nerve was contused but intact. The median nerve was sectioned for about three centimeters but held by a fine band. A twelve centimeter resection of the brachial artery, with application of freeze-dried homograft, was performed. The brachial vein was resected for two centimeters with primary end-to-end anastomosis. Postoperatively, there was dramatic improvement with good color, heat and pulsations. On January 13, 1954 split thickness grafts were applied to the wound with excellent results. Except for chronic drainage from the medial aspect of the wound in the left brachium, the hospital course remained uneventful. On April 9, 1954 a Rush nail was inserted from the upper portion of the humerus through the intramedullary canal to within three to four centimeters of the elbow joint. A bone graft was procured from the left iliac crest and impacted along the bone defect. Postoperatively, a Velpeau dressing was used to immobilize the fracture site. On April 15 a plaster shoulder spica cast was applied, and the patient's progress since that time has been uneventful. After three months, the shoulder spica was removed. Clinically, the fracture was found to be healing. X-rays showed bone being laid down, bridging the gap in the humerus. To date, only slight median nerve function has returned. After union of the humerus is complete, exploration of the damaged nerves is planned, with suture if possible.

The initial surgery of compound fractures of the humerus is that mentioned before.

Because of the anatomic proximity, the radial nerve is frequently injured. At initial surgery, the nerve should be visualized and a note made as to whether it is contused or actually divided. No attempt should be made to repair or "tag" the ends, but the ends may be held together with one suture. Following debridement, a hanging arm cast is applied if the patient is ambulatory. However, if the patient must remain in bed due to other injuries, skeletal traction through the olecranon, with due regard to the ulnar nerve, is indicated. Internal fixation is mentioned only to condemn it.

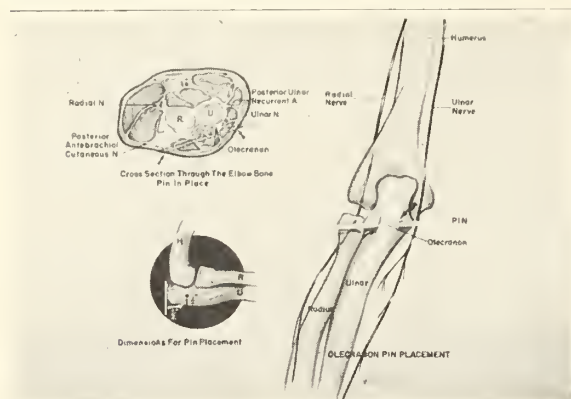


Fig. VIII. Olecranon traction is no problem if the surgeon:

1. Keeps posterior.
2. Thinks of the ulnar nerve.

RADIUS AND ULNA

The principles of initial wound surgery outlined above are applicable here. That the removal of segmental fragments of bone is contraindicated is again emphasized. The care of skin-exposed tendons and nerves is discussed in the section on the hand. The occurrence of mild, unexplained contractures following forearm injuries may be due to vascular injuries of the forearm. The use of internal fixation as initial treatment is contraindicated, and the best reduction possible with closed manipulation should be immobilized in a long arm cast, with the elbow and wrist in functional position. Where gross instability exists in the bony structure with co-existing large tissue defects and concomitant humeral fractures, the use of olecranon traction on the upper one-third and overhead traction with transverse Kirschner wires through the lower one-third of the radius and ulna may be indicated. (See figure VIII.) These types of extensive upper extremity injuries are seen frequently in auto "side-swipe" accidents.

Case IV.—R. W. On June 28, 1955 a 31-

year-old colored male was driving a large truck containing electrical conduit equipment when the car in front of him stopped suddenly. He jammed on the brakes, and as he did the six tons of electrical cable came tumbling in on the back of his cab, crushing him and causing the following injuries: (1) fracture, compound, comminuted, right radius and ulna; (2) fracture, compound, comminuted, left radius and ulna; (3) fracture, compound, transverse, mid-third of right femur; (4) fracture, compound, comminuted, right ankle and lower third of right tibia; (5) fracture, simple, comminuted, left ankle joint; (6) laceration, oblique, left calf and right chest; (7) fracture, simple, complete, left pelvis with diastasis of the symphysis pubis and torn urethra; and (8) severe secondary shock. The rigid abdomen prompted aspiration and blood was obtained. Temporary immobilization was applied immediately in the form of long arm casts to the right and left upper extremities, a Thomas splint to the right lower extremity and also the left lower extremity. The patient quickly recovered from shock on the administration of whole blood, and was taken to the operating room where the torn urethra was repaired. A suprapubic drainage and an indwelling catheter were left in the urethra. At the same time, lacerations of the left calf, right thigh and chest were repaired. The patient's condition gradually became worse at this time, and it became necessary simply to apply skeletal traction to the right femoral fracture and a short boot cast to the right lower extremity. On July 12 his condition had improved sufficiently so that open reduction and internal fixation of the right femoral fracture with a diamond nail could be performed. At this same time, fine Kirschner wire traction through the lower tibia was introduced for the oblique fracture of the right lower tibia. The casts on both upper extremities were changed, and the small granulating wounds excised and closed. Later, open reduction and double onlay bone graft were performed on the right radius and ulna. Sufficient bone was taken at this time from the left fibula to perform a subsequent onlay bone graft on the left radius and ulna, which was performed on August 25, 1955. Check x-rays taken on October 1 showed early callus in all fractured areas with enough callus in the right tibia and right femur so that he could be weight bearing with help. The patient was

discharged from the hospital on October 9, 1955 to be followed as an out patient.

HAND

Initial wound surgery of the hand differs in many respects from that elsewhere. Minimal amounts of skin are sacrificed; and, where doubt exists, skin should be left intact. Extensions of wounds in the hand are important if reparative surgery is to be performed initially. Figure IX shows approved methods of extension.



The hand is the only exception to the fact that reparative surgery is not a part of initial treatment of compound fractures. Lacerations of tendons may be grouped into three areas: (a) proximal to the distal palmar crease, including the forearm; (b) between distal palmar crease and middle mid-phalanx; and (c) distal to middle mid-phalanx. In (a), primary suture by the pull-out method or all silk technic is indicated. In area (b), closure of skin only with later free tendon grafts has been the usual procedure of choice. In area (c), tendon advancement with suture of tendon to base of distal phalanx with the digit in flexion is indicated. No definitive procedure should be carried out on tendons unless full-thickness skin can cover the tendons, as they will

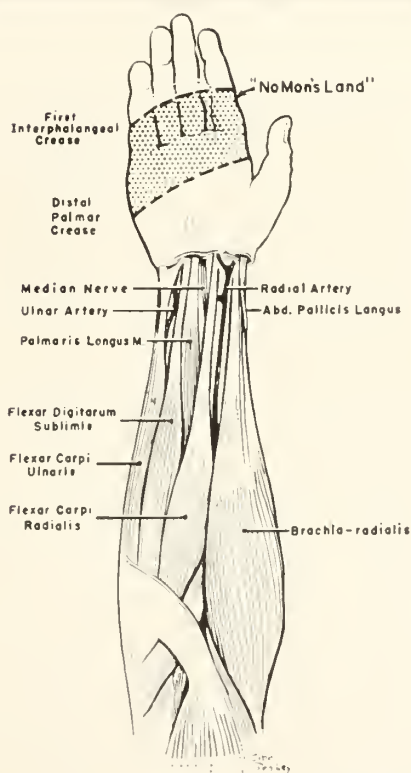
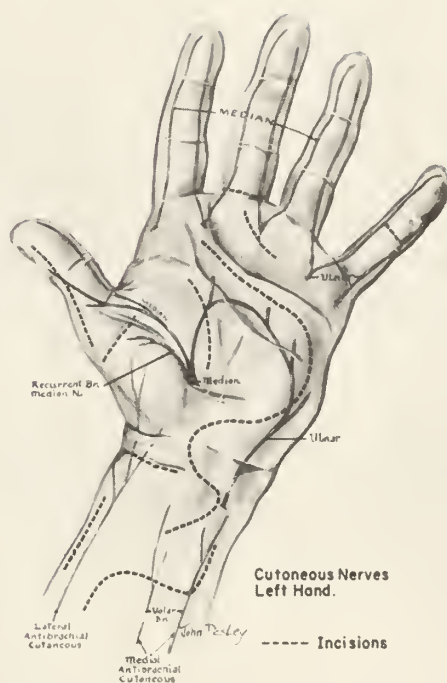


Fig. X: "Take a look" at an anatomy book before surgery on the hand or forearm.

A. Note "No Man's Land."

B. The palmaris longus "goes over" the flexor retinaculum, the median nerve under.

C. When in doubt, suture skin and repair later.

slough otherwise. For this reason sacrifice of intact but injured tendon may be necessary if adequate skin covering cannot be secured. Split-thickness grafts are not adequate to provide proper covering for bare tendons or bone. In general, primary suture of nerves of the hand and forearm is indicated where the extent of wound does not preclude this. The primary use of internal fixation is again contraindicated. Transverse skeletal traction through the middle phalanx will usually result in satisfactory positioning of metacarpal and phalangeal fractures.

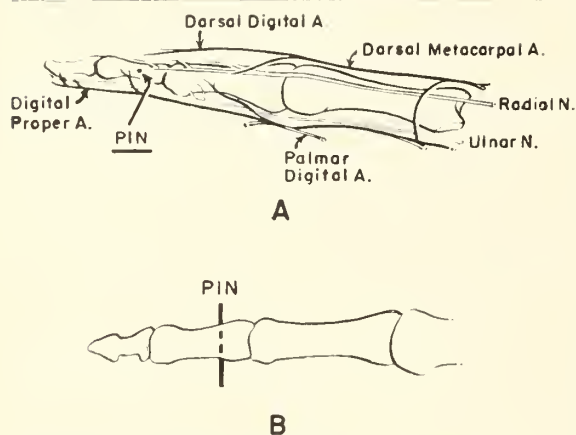


Fig. XI. Skeletal traction for fingers site of election in middle phalanx.

The rules of bone and cartilage preservation or excision are similar to those of other extremity and joint wounds. The removal of small, loose, unattached fragments is indicated. Where hematoma formation is anticipated, the use of small drains may be indicated.

Skin coverage in the hand should be achieved primarily, if at all possible. The only exception is extensive crushing or blast injury. Even in this type of injury, secondary closure should be mandatory as soon as possible. Initially, split-thickness grafts are indicated to achieve the main objective for initial hand surgery—attainment of a closed wound.

Partially or completely avulsed nails should be removed. The object of hand splinting should be the attainment of functional (writing) position. Fine mesh vaseline gauze over the closed wounds makes subsequent dressings easier. Pressure dressing of gauze fluffs with elastic bandage can be covered with the necessary plaster fixation in the functional position. Close observation of circulation and early section of

circular dressings are indicated. Here, post-operative elevation of the part, with suspension to an intravenous stand, is indicated for seventy-two hours.

HIP

In our experience, compound hip injuries are usually the result of shotgun wounds. Complete excision of loose bone fragments and foreign material is mandatory. Closure of synovial membrane and capsule, with draping of the soft tissues, is followed by an appropriate interval (five to ten days) by secondary closure. Following debridement, immobilization is achieved by femoral skeletal traction. The high incidence of hip dislocations associated with pelvic fractures, together with injuries to the lower genitourinary tract, should be checked by x-ray and cystogram. Hip dislocations should be reduced as soon as practical after diagnosed. The sciatic nerve is particularly vulnerable in injuries of this area.

Case V.—B. H., a 23-year-old white male was admitted on April 22, 1954, approximately ten hours after an automobile accident. There was history of being unconscious for five hours following the accident, but he was mentally alert upon arriving at the hospital here. No treatment had been undertaken at the local hospital. The patient was found to have a posterior dislocation of the left hip with no nerve or artery injury. About fourteen hours following dislocation, the left hip was reduced without difficulty under spinal anesthesia. Eight pounds of Buck's traction was then applied for three weeks. The mandible also was fractured in the midline and left condyle; and, on April 28, 1954, the jaw was wired. The patient was allowed up on crutches at three weeks.

ASSOCIATED VASCULAR INJURY (Refer to Case III.)

Mutilating extremity injuries frequently require amputation. In general, the indications for initial amputation have been (a) such widespread destruction that there is no hope of ever having a pain-free extremity, which is of more value than a prosthesis; (b) such severe injury that an adequate debridement and prevention of gangrene are impossible; and (c) destruction of long segments of bone, nerve, and particularly major blood vessels with the resultant "dead" extremity. With the remarkable strides in reconstructive surgery, particularly of the hand, made in the last decade, amputation for (a) is becoming less common and rarely

indicated initially. The use of massive broad-spectrum antibiotics has somewhat decreased the frequency of amputation for indication (b). However, it must be emphasized again that antibiotics are no substitutes for adequate debridement. For indication (c), the use of bone, nerve, and particularly vascular grafts is becoming routine. The use of blood vessel grafts is showing satisfactory results in reducing the amputation rate following trauma.

The pulseless extremity, which has major vascular interruption with coldness, severe cyanosis or pallor, mottling, and other signs of insufficient vascular supply less than eight hours following injury, demands immediate surgical restoration of blood flow. Vessels should be anastomosed primarily, if possible, after adequate resection with proximal and distal control of bleeding. Vessels, particularly elastic arteries, are injured beyond the area of visible damage following high momental trauma, and inadequate resection will frequently be followed by thrombosis. A reasonable rule is not to resect clean lacerations resulting from sharp bodies such as knives, glass, etc., and to resect at least one centimeter above and below the area of all visible damage from bullets, with other types of trauma falling between these extremes. If the resulting gap is too large for primary anastomosis, primary homograft or autogenous vein grafts should be used. The repair must be done as soon as possible rather than after transportation to a large center. The sites of most frequent vessel injury requiring repair are the brachial, common femoral, popliteal, and iliacs. Reliance upon sympathetic blocks or sympathectomy alone in these cases is mentioned only for strong condemnation.

TRANSPORTATION

The initial extremity surgery should be done within the "golden six hours" of injury at the nearest operating room. As outlined above, the initial surgery is *not* "specialist surgery" due to the time factor. The important steps are relatively simple, safe and effective. However, other injuries, such as head injuries, eye trauma, genito-urinary injuries, etc., may demand early transportation to facilities where specialized care is available.

The only contraindications extremity trauma impose upon transportation by ambulance are bleeding and shock. The wounds

are covered with sterile bandages and the injured extremity immobilized. Upper extremities are best immobilized in a long arm cast or plaster Velpeau, and the lower in a Thomas splint. The patient's blood pressure, pulse, and respiration should be stabilized within normal range for two to three hours and no contraindications such as spine injury, respiratory obstruction, coma, etc., present before long transportation is started. An increasing number of thoracic and neurosurgeons are traveling reasonable distances to extend care where the patient's precarious condition precludes transportation.

SUMMARY

(1) The early "Golden Six" initial treatment of severe extremity injuries is of extreme importance.

(2) The use of direct pressure over the wound to control hemorrhage is usually safe and efficient.

(3) Emergency general measures include: (a) fluid (principally blood) replacement, (b) analgesia, and (c) immobilization.

(4) Sterile bandaging of the wound and splinting are early responsibilities.

(5) Thorough early debridement is the essence of proper therapy.

(6) In joint wounds, removal of articular surfaces, capsules and synovia are minimized. The capsule and synovia are closed if possible.

(7) The initial use of internal fixation, such as nails, plates, etc., is strongly condemned.

(8) Initial repair or "tagging" of nerves in the severely traumatized limb is not recommended, but suture of nerve ends with a single suture is advocated.

(9) Vascular continuity must be established if blood flow is insufficient because of trauma.

(10) Considerations of specific fractures are briefly discussed.

(11) These simple steps represent the nucleus of acceptable initial wound surgery.

Our thanks to the Medical Photography Department, V. A. Hospital, Birmingham, Alabama, especially, John A. Dessley, Medical Artist.

1800-12th Avenue S. (Dr. Vesely).



Editorials

SAMPLE BUYERS

Physicians of Mobile and Montgomery have called attention to an individual who has been trying to buy up samples of medicine from individual doctors. How many other localities he may have visited in the state is not known.

Reflection will cause anyone to know that disposal of samples in such way would be an unethical procedure and attended by a certain amount of danger. This is emphasized in an expression of opinion given by a leading pharmaceutical house. Said this concern: "What usually happens is that they buy samples from doctors, collect the material in their warehouse until the samples accumulate, dump the samples into larger containers and then peddle the product to unscrupulous druggists. Naturally this leads to a great danger, for many times the products are exposed to temperatures which destroy activity, and other times before they get to the customer they are extremely old and probably deteriorated.

"We have turned this individual into the Food and Drug Administration and they investigated, but about all they can do is arrest him if he is repackaging and not labeling the repackaged product in a way that does not conform to Food and Drug regulations.

"Naturally, when the samples are repackaged there is no longer any opportunity to check control numbers and as most of these characters are not pharmacists, there is real danger that they can commit serious errors, jeopardizing the health of a lot of people."

The profession in Alabama is cautioned to be on guard!

OUTLOOK FOR TODAY'S INFANTS

Medical advances of the past half-century meant the difference between life and death to 300,000 of the four million babies born last year in the United States, Health Information Foundation reported recently.

In the March issue of *Progress in Health*

Services, its monthly statistical bulletin, the Foundation said that 108,000 infant deaths were registered in the U. S. in 1956, a rate of 26.1 per 1,000 live births. Had the infant mortality rate of 1915 prevailed during 1956, the Foundation added, another 300,000 babies would not have lived to celebrate their first birthday.

The outlook for today's infants is especially bright once the first week of life is past. The current mortality rate for the last 51 weeks of infancy is 10 per 1,000 live births, or only one-seventh of the 1915 rate. By contrast, the Foundation pointed out, the mortality rate for the first week is 16.7 per 1,000 births, a decline of less than 50 percent in 40 years.

"Many diseases that formerly took high tolls of infants after their first week have been largely brought under control and in some cases eliminated," the Foundation said. "In general, these are the diseases associated with inadequate sanitation, poor hygiene, poverty and low standards of living. The record has been nearly as good among the digestive diseases . . . Infant deaths from respiratory diseases have declined by almost three-fifths."

Behind this saving of 300,000 lives, said the Foundation's president, George Bugbee, lie two major factors—the medical progress of the past half-century and the public's "increased willingness to take advantage of this progress." Most U. S. mothers, he said, "have amply shown" their interest in receiving good prenatal care, in having their babies in the hospital rather than in the home, and in making sure their children get preventive medical care after birth.

Despite the good record, Mr. Bugbee added, there is room for further improvement. "It is likely," he said, "that further strides will be made in the future, but that the success of medical science will continue to depend on better understanding between hospitals, doctors and the public."

TRANSACTIONS OF THE ASSOCIATION

1957 SESSION

TRANSACTIONS OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA HELD AT MOBILE, APRIL 18-20, 1957.

The Medical Association of the State of Alabama convened in annual session in the Ballroom of the Admiral Semmes Hotel, Mobile, and was called to order at 9:00 a. m. by the President, Dr. Grady O. Segrest.

Invocation was offered by Dr. Howard M. Reaves, Pastor, First Baptist Church, Mobile.

Addresses of welcome were delivered by Dr. Arthur A. Wood, President of the Mobile County Medical Society, host to the Association, and the Hon. Henry R. Luscher, Mayor-President, City of Mobile.

Reports of committees were called for by President Segrest, each, in its turn, being referred to the State Board of Censors.

COMMITTEE REPORTS

Medical Service and Public Relations

This year was approached with a profound sense of responsibility. The amount of work and projects assigned to this committee for implementation has been prodigious. By necessity, much of the work consists of long-range planning. Last year, on the recommendations of this committee, its chairman, Dr. J. O. Finney and the then Director of Public Relations, the Association and the Board of Censors saw fit to embark on an expanded program of endeavor. This expanded program called for an effort to improve public relations and our approach to the public. It was felt that the job of selling the story of the physician to the public in Alabama had been sporadic and lacking in continuity. This committee was instructed to implement a long range program, widened in scope and tied together in such a manner that the year to year effect would be far reaching and of a continuing nature.

The chairman of the committee also expressed grave concern for the lack of interest of the individual members of the Association for the important work of this committee. Somewhere in the training of many of the members of this Association there has been a failure to impress upon them their obligation to organized medicine. They have been taught nothing of their

responsibility to the general public or to their fellow physicians when they accept an M. D. degree. It has fallen our lot to attempt to bring this important message to more people in the Association. It was recommended that more men be appointed to take part in the activities of this committee and an indoctrination course be set up for all new members of the Association. It was also recommended that public relations forums be set up at each annual session of the Association in an effort to stimulate the interest of the general membership and that a continuing basic program be set up with the medical students and internes in an effort to create an interest during the formative years.

Many other projects as a means to this end were suggested: (1) Speakers Bureau, (2) Medical Forums, (3) Liaison with Farm Bureau and the Extension Service, (4) Improved liaison with the Bar, Dental and Pharmaceutical Associations, (5) Emergency Call Systems, (6) Television and Radio Programs, and so on.

Of course, it was realized that such an ambitious approach to our program would require the expenditure of more funds, not only for the hiring of competent personnel to do the job but also in many other ways. The Association has provided for the increase in funds, but an increase in revenue will not be realized until the 1957 dues are collected.

The Association also created the position of executive secretary and authorized him to hire an assistant and other personnel necessary to go forward with the expanded program. This initial step was a tremendous stride in the right direction, but there is much left to be done.

The committee first instituted a system which used thirteen subcommittees, the chairman of each subcommittee being a member of the Committee on Medical Service and Public Relations. The subcommittees were as follows:

- 1) Expansion of Physician Placement Service and Survey of Health Facilities and Service.
- 2) Speakers Bureau.
- 3) Medical Forums.
- 4) Closer Liaison with the Farm Bureau and Extension Service.
- 5) Closer Liaison with the Bar, Dental and Pharmaceutical Associations.
- 6) TV Programs, Radio Programs and Closer Liaison with the Press.
- 7) Public Safety Program.
- 8) Public Relations Institutes (Forums).
- 9) Program with Medical Students, Internes and Residents.
- 10) Closer liaison with Specialty Groups.
- 11) Emergency Call System.
- 12) Indoctrination Course for New Members.
- 13) Mechanism of Annual Session.

From three to five men were appointed to each of these subcommittees; thus fifty-three new men were introduced to the workings of the Association. It is felt that this approach has been partially successful and should be continued.

At the meeting of the Committee on Medical Service and Public Relations on July 15, 1956, all of the members of the subcommittees were invited to attend. For half of this meeting the subcommittees met separately and discussed their respective problems, and then the chairman of each group presented the results of his committee's deliberations to the Committee on Medical Service and Public Relations. Much good came from this meeting. Not only were several well outlined plans and many new ideas born of this session but also the enthusiasm of the group present was testimony to the wisdom of endeavoring to get more people into the actual work of the Association.

Much of the work assigned to this committee has been implemented, and programs are now underway. Plans for a survey of our health facilities and services and an expansion of our physician placement service have been set up. A speakers bureau is being set up and a brochure has been prepared to be sent out to all the civic clubs of the state, informing them of the availability of doctors as speakers to their respective groups. You have all received cards seeking your cooperation in this phase of the program. You are earnestly beseeched to make yourself available for this very important phase of the work. Nothing enhances public relations more than for a busy doctor to give a little of his time to appear before a lay group to discuss problems of interest to them.

A meeting has been held with the leaders of the Farm Bureau and Mr. Aubrey Gates of the A. M. A.'s Council on Rural Health, and this phase of the work is underway.

Liaison with the Bar, Dental and Pharmaceutical Associations has been discussed at length, and it is recommended that a fraternal representative from each of these groups be invited to attend each annual session of the Medical Association of the State of Alabama.

A plan is underway to present, on film, one minute spot announcements on medical subjects over TV stations throughout the state. These films are being made up now, and it is anticipated that they will be on the air in the not too distant future. Watch for them, and tell your patients that you and your Medical Association are responsible for their being there.

Our rapport with the press has been enhanced tremendously during the past year. This was forcefully brought to mind recently in Birmingham at the annual seminar of the Alabama Academy of General Practice, where not only were there daily reports of the program but on the final day a half page spread was presented to the public. In Mobile, while the Alabama Chapter of the American College of Surgeons met at Point Clear, daily front page articles appeared in the Mobile newspapers. The appearance of many more editorials favorable to the medical profession has been quite obvious. This relationship

should be engendered by our full co-operation with the people who tell our story to the public through the medium of the press.

An introductory indoctrination course for new members has been set up and is to be presented on Friday evening of this annual session. It is recommended that this be a continuing program and that a means be formulated to be certain that all new members of the Association attend this course.

The mechanism of the annual session has been studied, and recommendations have been submitted to the Board of Censors and to the committee that was formed to study the Constitution and By-Laws.

Much has been accomplished, but this is only the beginning. There is a vast frontier in Alabama still yet unexplored. There is far more to be done. The work of this committee has suffered because of the magnitude of the job that it has been asked to do. It should be added that the important consideration is the efficiency of the overall program and not the time and effort of the individual members of this committee. It is recommended that a Committee on Public Relations and a Committee on Medical Service be set up, each with a chairman responsible to the Board of Censors. It is felt that this would immeasurably expedite the overall long-range program that the Association wishes to accomplish.

According to a recent survey by the Council on Rural Health of the American Medical Association, 51% of the population of the state of Alabama lives in rural communities. While such programs as emergency call systems, speakers bureaus, and medical forums are of specific importance, it is felt that the medical profession in Alabama has missed a great opportunity by not fostering relationships with and studying problems peculiar to this largest segment of our population. It is therefore recommended that a permanent working Committee on Rural Health be established. It is also recommended that the aid of the Rural Health Committee of the Alabama Academy of General Practice be solicited in initiating this work. It is recognized that the work of these three committees will overlap, as much of the work has to do with public relations; however, the various programs can easily be integrated by the executive secretary's office.

Events and comments of the past few years have drawn attention to need for some revisions and study of our Constitution and By-Laws. In keeping with the precedent set by other democratic organizations such as the A. M. A., it is recommended that a standing Committee on Constitution and By-laws be established to keep the Association constantly informed of the status of the Association laws.

It is doubted that even a small segment of the members of the Association are cognizant of the vast amount of work that this organization expects and gets from the ten men who comprise the State Board of Censors. As you know, this same group also does the work of the State Committee on Public Health and the State Board of

Medical Examiners. It is felt that these men should not be shackled with the responsibility of studying in detail all of the many and varied proposals and resolutions that come up from time to time. It is felt that these should be our Senior Citizens who direct the affairs of the Association and review all matters pertaining to Association policy and that they should not be shackled with, in the vernacular of the medical student, the scut work of the Association.

The Association has also been criticized on the supposition that the individual member, John Doe, M. D., has no voice in its affairs, that he has no place to go with his individual problems and that he has no place to express his opinions. The chairman of this committee, therefore, recommends that the Board of Censors initiate and set up a system of responsible reference committees to meet at the time of each annual session to consider matters previously presented to them in writing, to hear all arguments pro and con, then to meet in executive session, formulate an opinion, and report back to the Association for action. This system should be patterned after the one that has proved so successful in our parent body, the American Medical Association.

The members of the Association are not cognizant of the fact that the officers and members of the various working committees not only donate a vast amount of time to this organization but also bear the expense of traveling while working in the interest of the Medical Association of the State of Alabama. It is recommended that some system be set up to reimburse the men who incur undue expense in doing your work for you.

The Medical Association of the State of Alabama stands today in an enviable position. Our organization is a unique one, as has already been pointed out. This type organization has given us great stability over the years. This stability must be maintained. We are now in a state of flux and reorganization. If we can judiciously take stock of our present status, reflect with care on our wide-range expanded program, then project our efforts efficiently in the right directions, our possibilities are boundless. The Medical Association of the State of Alabama has the potential to set a pattern as a leader in all of American Medicine.

I wish to take this opportunity to thank our Executive Secretary for his guidance and untiring efforts in our behalf, the officers of the Association for their loyalty in attending our meetings and helping with our discussions, and each and every member of the committee for the excellent co-operation and enthusiasm they have extended this year. Their deliberations and ceaseless efforts have made this a fruitful year for the Association. They may bask in the inner confidence that they have fulfilled a part of their responsibility and obligation to organized medicine. The general public, your patients in particular, and the whole of medicine will ultimately profit from their efforts.

SUPPLEMENTAL REPORT

The Committee on Medical Service and Public Relations makes the following supplemental report:

The purpose of submitting to you a supplemental report at this time is to appraise the Association of some of the activities that this committee has engaged in since the completion of the original report in February 1957. Late in 1956 this committee proposed to the Board of Censors that a suitable award be presented to lay persons who have been outstanding in health work in the state of Alabama. The Advisory Committee to the Board has submitted the name of "William Crawford Gorgas Award" for this honor. A maximum of one award for each division of the Association will be presented at the annual meeting, beginning in 1958. The vice-president of each division will select two physicians and two newspaper men to serve as a nominating committee for the award to a person in his division. The name of the nominee from each division will be forwarded to this committee for final approval.

In the fall of 1956 the committee recommended that the Medical Association adopt a specific policy on publicity. The statement of policy was divided into two sections, both of which have now been approved by the Board of Censors. The first is titled "Guiding Principles for Participation in Telecasts and Broadcasts" and it appeared in the February issue of the Journal. The second section is titled "Policy on Publicity for Guidance of Members" and it appeared in the April issue of the Journal. The committee strongly urges every member of the Association to familiarize himself with these statements of policy and conduct himself accordingly.

The brochure, *Your Doctor Speaks*, which was formulated by the chairman of the subcommittee on Speakers Bureau, Dr. Howard Holley, has been printed and will be distributed to the various civic organizations throughout the state. This brochure is available at this meeting for your inspection. The committee again seeks your cooperation in making yourself available for this important phase of our public relations effort.

The one minute spot films on medical subjects for distribution to the T. V. stations throughout the state are now available and will be presented to you as a part of this report. These films were produced with the cooperation of Mr. Graydon Ausmus, Director of the Broadcasting Services of the Extension Division of the University of Alabama. All of these films will be edited either by the subcommittee on liaison with the press, radio and television or the Committee on Medical Service and Public Relations before they are presented to the public. The committee extends special praise to Dr. E. B. Glenn and his subcommittee for developing this important phase of our program. The committee also extends special praise to its vice-chairman, Dr. M. Vaun Adams, for his untiring efforts in setting up the introductory indoctrination course for new members of the Association which is to be presented on Friday evening of this annual session. The committee recommends that all of the members of the Association attend this indoctrination course.

Ex Officio

G. O. Segrest
J. A. Martin
D. L. Cannon
D. G. Gill
W. R. Carter
Hugh Gray
S. W. Windham
W. D. Anderson
E. B. Robinson, Jr.
J. Paul Jones
Mrs. J. F. Holley

J. Michaelson,
Chairman

M. V. Adams,
Vice-Chairman

H. L. Holley
T. C. Donald, Jr.
J. G. Daves
A. C. Gipson
H. M. Simpson, Jr.
N. E. Cowart
H. C. Byrne
J. O. Colley
H. G. Hodo, Jr.
J. S. DuBois
J. E. Moss
E. B. Glenn
Paul Nickerson

Maternal and Child Health

CHILD HEALTH

Last year your committee reported an analysis of the premature deaths for 1954. Now we would like to make some suggestions as to what might be done to improve the care of all newborns as well as the prematures.

First, more prenatal clinics should be established. It is our understanding that only four counties in the state have such clinics at this time. It is axiomatic that better prenatal care results in better obstetrics, and therefore a better prognosis for the infant.

Secondly, we would suggest that a symposium, seminar or panel discussion be arranged during the State Medical Association meeting. This program should be conducted jointly by obstetricians and pediatricians. This suggestion is prompted by the many deficiencies found in our study, both in obstetric and infant care. This suggestion is further prompted by the success encountered by the Association of Obstetricians and Gynecologists in Birmingham last year when they invited each physician who had had a maternal death during 1955 to come to their meeting for a friendly discussion of his case. This feature is to be repeated this year.

Again we would like to urge all physicians to recommend the use of the Salk vaccine for all individuals under forty years of age. Public health authorities feel that poliomyelitis could be eliminated if eighty per cent of people under forty years of age were inoculated with three injections of Salk vaccine. If the physicians of the state would take the initiative in this program, there would be no need for the National Foundation for Infantile Paralysis or for the Federal Government to interfere.

MATERNAL HEALTH (PRELIMINARY REPORT)

As of the date of this report, January 29, 1957, 64 maternal deaths have been reported for the year 1956 in the state of Alabama. Reports on all of the deaths for November and December 1956 have not yet been received and, for that reason, no accurate comparison with the maternal deaths for the year 1955 can be made in this preliminary report.

The leading causes of death in 1956 among expectant mothers were eclampsia, hemorrhage

and ruptured uteri. These were also the leading causes of maternal death in our report for the year 1955; however, deaths from eclampsia have been reduced by one-half during the past year. It is widely appreciated by all doctors who give medical care to pregnant women that the best treatment of eclampsia is *prevention*. Perhaps better prenatal care to all pregnant women in the state during the past year is the reason for the reduction in the number of deaths due to this disease.

There were ten deaths due to ruptured uteri in the material gathered thus far for the year 1956. Ruptured uteri, for the most part, were man-made, either by the administration of Pitocin, traumatic delivery of one kind or another, or rupture of a previous cesarean section scar. Better judgment and the application of skill instead of force in the management of delivery would materially reduce the mortality in this category.

In most of the deaths due to hemorrhage, it is the old story of "too little and too late." Adequate blood replacement therapy, timely administered, will save most hemorrhage cases, provided of course that proper treatment to stop the hemorrhage is also timely instituted.

Eclampsia, hemorrhage and ruptured uteri accounted for one-half of the maternal deaths in Alabama during the past year. Some expectant mothers in our state continue to die without being seen by a physician. Whether or not this is due to lack of education and foresight on the part of the patient or to the inadequacy of medical facilities is not determined by our study.

Your committee wrote to every doctor who signed a maternal death certificate last year, requesting a clinical summary of the medical facts incident to the patient's death. Replies to these inquiries were promptly submitted in about one-half of the instances. To get any information on the remainder of the deaths was like "collecting an old bill." It appears that some doctors feel the patient's death is water over the dam; it was unpleasant to them at the time, and they do not care to be reminded of something that is unpleasant. It is hoped that all of the doctors in Alabama will come to realize that the function of the Committee on Maternal and Child Health is one of continual education and that the clinical data assembled are for study and enlightenment not only of the committee but of all who render medical care to pregnant women.

In April of 1956, for the first time, all maternal deaths were discussed at the annual meeting of the Alabama Association of Obstetricians and Gynecologists. All members of the Medical Association of the State of Alabama who signed a maternal death certificate during the year 1955 were invited to this meeting. There an opportunity was afforded them to gain helpful information at a friendly round table luncheon at which all deaths in the state in each particular category were impartially discussed. At this meeting, Doctor Hartwell G. Boyd, of Atlanta, Georgia, was a guest and favorably impressed by the method in which all maternal deaths in Alabama were being studied by your committee. Doctor Michael Newton of Jackson, Mississippi,

was also a guest; and he, too, spoke favorably of the method being used. Both he and Doctor Boyd mentioned they would like to see such an educational program started in Mississippi and Georgia. Doctor Henry Turner, of Memphis, Tennessee, another guest speaker on the program, quoted from your committee's report in one of his lectures and commended your committee on the educational features of this study. All of the members of the Alabama Association of Obstetricians and Gynecologists are in favor of discussing the maternal deaths each year at its annual meeting. And again, on April 17, 1957, in Mobile, Alabama, all maternal deaths for the year 1956 will be divided into seven categories and discussed at luncheon round tables, with a qualified obstetrician in charge of each discussion group. Every member of the Medical Association of the State of Alabama who signed a maternal death certificate during the year 1956 will be invited to attend one of these luncheon group meetings.

Although it appears that the total number of maternal deaths for the year 1956 will be less than for 1955, it is not known, at this time, whether the deaths per 100,000 live births will be lower as the total live births for the year 1956 have not yet been made known to us. A final report will be submitted later.

Hughes Kennedy, *Chairman*
Buford Word
Norborne R. Clarke, Jr.

Cancer Control

Cancer continues to be a very lethal disease. The incidence is increasing with a growing and aging population. Because of this fact your State Medical Association continues active in cancer control in a number of ways.

First, this activity continues through the State Health Department, Cancer Control Division, in its operation of the state's six cancer clinics, its allocation of patients for diagnosis and therapy, and through the expenditure of funds provided by the State Legislature for indigent patient care.

In the education of the physicians, our State Medical Association continues active by sending to each physician the Cancer Bulletin and by publishing in the State Medical Journal selective and germane articles on cancer. Finally, our State Association continues in close co-operation with the Alabama Division of the American Cancer Society in the education of the general public.

The state cancer clinics are operated by the Division of Cancer Control of the State Health Department under the able directorship of Doctor W. H. Y. Smith.

The Cancer Control Committee is quite alarmed by the curtailment of the function and services of the state cancer clinics because of the reduced funds made available by the Legislature for their operation. This curtailed service amounts to the following comparison of patients approved for treatment in 1955 and 1956:

Number approved in 1955	1362
Number approved in 1956	1095

The breakdown of the number of approved, the type and site of cancer diagnosed, and multiple clinical details are not available for this report since the system now in use by the Cancer Control Division of the State Health Department does not permit these detailed data so soon after the ending of the year. It seems in order for the Cancer Control Committee to recommend that the Association and its individual members use every influence possible to restore or increase the original legislative allocation of funds.

The initiation of state tumor clinic service is by the private physician who files forms with the local Welfare Department which investigates and sends the request for service through the County Health Department to the State Department of Health where it is acted upon.

In the education of physicians and the public it is noted that the emphasis has been on early diagnosis, adequacy of therapy, and research. Educational programs have not emphasized the important field of prevention. Frequently such programs should review, either by publication or planned programs in sectional meetings, the common "benign" lesions that experience has proven often precede cancer. Recognition and eradication of such lesions should be emphasized as an important cancer control function.

The Cancer Control Committee had one meeting in 1956. This was in Birmingham on August 18th in conjunction with several members of the executive board of the Alabama Division of the American Cancer Society, representatives of the Alabama Pathology Registry, and representatives of specialties treating cancer.

At this meeting, Doctor E. Cuyler Hammond, Director of the Statistical Research Section, American Cancer Society, reviewed the requirements of tumor clinics recently adopted by the American College of Surgery—specifically that each hospital fostering a cancer clinic or cancer program must maintain a hospital tumor registry as a part of the requirements to gain approval. Doctor Hammond discussed the accumulated data and their value in our state pathology registry. He reported that other states have developed a state tumor registry that became a central registry for hospital tumor registries. Such a registry files not only histologic diagnostic data but also therapy details, follow-ups, and end results. The value of integrating our pathology registry into a state central registry, possibly within the State Health Department, was discussed in detail. Doctor Hammond offered technical and financial assistance to set up such a central state tumor registry.

Your Cancer Control Committee was unanimous in the opinion that such a central tumor registry would be of great benefit to our state cancer program. Though such a central registry should have files on all cancer patients within the state, it was agreed that in the beginning the present state tumor clinics would be invited to participate by filing data with the central registry.

Letters were sent to the medical directors of each of the state tumor clinics requesting consideration and willingness to participate in the

program. Of the four clinics replying to date, all favored the establishment of such a central committee.

Therapy patterns remain unchanged since the last report. The need for blood for patients under therapy continues great. All cancer patients' relatives should be urged to secure Red Cross Blood Bank cards to have a source of blood to meet these needs.

The need for a state tumor clinic in the northern part of the state with its increasing population remains urgent. Local medical societies and physicians must initiate this by request.

RECOMMENDATIONS

The Cancer Control Committee recommends the establishment of a state central tumor registry. It is suggested that this be accomplished by expanding the present state tumor registry now jointly sponsored by the Alabama Association of Pathologists, the Alabama Hospital Association, the Alabama Division of the American Cancer Society and the Cancer Control Division of the State Health Department. Sufficient funds have not been available to include filing of clinical, therapy, and follow-up data on all cancer patients within the state. Such would be the function of this proposed central registry. The additional sponsorship of the State Medical Association with other groups, such as the Alabama Chapter of the American College of Surgeons, the Alabama Association of Obstetricians and Gynecologists, and many other interested medical groups, would adequately support this central registry in its expanded function. (Such an expanded registry for the entire state could be incorporated as a non-profit unit with an operating board chosen from all the supporting groups or specialties.) The present tumor registry has the diagnosis, with record slides, of all cancer cases recognized in Alabama for the past ten years. The committee recommends accepting the offer of the American Cancer Society through Doctor E. Cuyler Hammond to give technical assistance and aid in setting up the registry.

Also, the Cancer Control Committee recommends that consideration be given the preventive aspects of cancer in our educational program planning.

The committee also recommends that proper representation from the State Medical Association be made to the next Legislature, or representative committees, of the urgent need for the restoration or increasing of appropriations for care of cancer patients.

The committee wishes to give recognition and thanks to the unselfish physicians who are giving so generously of their time and services in the six state aid tumor clinics. They shoulder the total load of approximately eight thousand patient visits per annum.

Also, recognition and appreciation goes to the pathologists of Alabama who have so generously given time, and provided not only a diagnostic record but also slide records of all cancer diagnoses filed in the tumor registry.

Doctor W. H. Y. Smith and his staff are doing an excellent job with the tumor program in spite of limited appropriation and personnel.

Finally, the committee wishes to express appreciation and give proper recognition to Mrs. Lillian G. Meade, her staff, and her executive board for their continued co-operation and very valuable services in cancer education and research. Indeed, the Alabama Division of the American Cancer Society under the leadership of Mrs. Meade has done an outstanding performance.

W. N. Jones, *Chairman*
J. P. Chapman
T. B. Hubbard, Jr.
A. E. Casey
John Day Peake

Postgraduate Study

Your Committee on Postgraduate Study did not function alone in programs during the past year. It co-operated with and co-sponsored programs by the Medical College of Alabama and the Alabama Academy of General Practice.

Such activities consisted of:

1. Semiannual meeting of the Alabama Academy of General Practice, August 1956.
2. Black Belt Postgraduate Society, October 1956.
3. Semiannual meeting of the Alabama Academy of General Practice, January 1957.
4. Development of a program for 1957 for the Franklin County Medical Society.
5. Development of a program sponsored by Lederle Laboratories, for May 19, 1957 to be held at the Tutwiler Hotel, Birmingham.

The Alabama Academy of General Practice sessions were held at the Medical College in Birmingham.

The Black Belt Society meeting was held in Selma.

The Franklin County Medical Society meetings are held in Russellville.

There were no expenses incurred by this committee of the Association.

The chairman of the committee also serves as chairman of the Postgraduate Committee of the Medical College of Alabama.

James R. Garber, *Chairman*
A. S. Dix
A. F. Wilkerson

Mental Hygiene

The Committee on Mental Hygiene wishes to call to the attention of the Association the following developments during the past year.

1. The accrediting of the three-year psychiatric residency program of the Department of Psychiatry of the Medical College, under the direction of Dr. Elmer Caveny, by the American Board of Psychiatry and Neurology. This means that complete psychiatric training, qualifying the trainee for examination by the Board, can be had at our Medical Center. Dr. Caveny is to be congratulated.

2. The establishing of a psychiatric out-patient clinic and research department, due to the benevolence of Mr. and Mrs. Joseph Smolian. This is in addition to the Smolian Fellowship for the training of psychiatric residents that was called to your attention last year. We are indeed indebted to Mr. and Mrs. Smolian.

3. Blue Cross-Blue Shield has a health contract with the T. C. I. and Railroad Company providing benefits for mental illness. We are continuing to urge Blue Cross-Blue Shield to extend this benefit to all subscribers. We have received correspondence this year, indicating interest in such benefits, by other members of the Association, and continue to ask that this interest be indicated to us and to Blue Cross-Blue Shield.

4. The committee wishes to express its appreciation to the Association for its part in the successful passage last November of the \$4,000,-000.00 bond issue for capital expenditures for the State Hospitals.

5. The Mental Hygiene Division of the State Health Department, under the direction of Dr. John McKee, in conjunction with the local health departments, has continued to grow. A mental health clinic has been opened in Gadsden, for Etowah County, under the leadership of Dr. C. A. F. Holler, Health Officer. Clinics continue to operate successfully in Birmingham, University of Alabama, Florence, Tusculumbia, Tuskegee, and Montgomery.

6. The Alabama Association for Mental Health, under the direction of Dr. J. Wilbert Edgerton, has shown phenomenal growth. Since our last report, mental health groups have been formed in the following counties: Talladega, Houston, Bibb, Calhoun, Cherokee, Cleburne, Fayette, Jackson, Marshall, and Shelby. Groups are already operating in Jefferson, Montgomery, Mobile, Tuscaloosa, Lee, Etowah, Dallas, Chambers, Talladega, the Tri-Cities region, Pike, Morgan and Madison Counties. May we again urge you to join your local group.

7. With the aid of tranquilizing drugs, many patients are being released from mental hospitals to return to their homes. The care of these patients, for the most part, will be the responsibility of the general practicing physician. We urge each member of the Association to acquaint himself thoroughly with the tranquilizing drugs and to continue the same vigorous treatment established in the hospital.

8. Again the committee would like to thank those many individuals and groups who are taking an active part in community work and who serve the State and Federal hospitals. The quality of psychiatric care is raised immeasurably by these efforts.

Jack R. Jarvis, *Chairman*
F. A. Kay
J. S. Tarwater

Prevention of Blindness and Deafness

There has been nothing new of importance or interest to report to the Association on either the local or national level during the past year. The

committee can think of no new legislation which might be needed.

Gayle T. Johnson, *Chairman*
George E. Johnson
Truett Jackson

Tuberculosis

The committee on tuberculosis met in Birmingham, January 12, 1957, to evaluate the tuberculosis picture in Alabama during 1956.

During the first 10 months of the year there were 273 deaths, of which 125 were white and 148 were colored.

The problem of the recalcitrant patient is still with us. This includes those refusing care, as well as those who fail to co-operate in any way with his isolation and protection of the public. As has been said before, laws controlling these individuals cannot be effective without adequate facilities for enforced isolation. At this writing, sufficient facilities still are lacking, but the coming year should see this corrected to a large degree.

The coming year will see construction started on a new facility at Tuscaloosa, a new wing at Jefferson Sanatorium, and possibly expansion at Mobile. The hospital at Montgomery currently has an application for funds to build a 100 bed addition. These increases will make quarantine more feasible.

Treatment, to be most effective, must have some period of time in the sanatorium. It is the feeling of the committee that the initial weeks of treatment show the greatest benefit from drugs and give the patient a better opportunity for learning the discipline of rest; also his response to drugs can be properly evaluated. It is felt that, ideally, chemotherapy and collapse should be initiated in the hospital, except under unusual circumstances. To reiterate, it is the consensus of the committee that ideally it is desirable for every patient with tuberculosis, requiring active treatment, to spend a portion of that treatment regimen initially in the sanatorium, not only to increase the effectiveness of his treatment program but also to safeguard to a greater degree his future and to isolate him during the time when he is the greatest public health problem. The committee members take cognizance of the fact that under our present circumstances the ideal program in most instances cannot be realized. Therefore, it is agreed that home treatment programs should be set up and properly supervised, so that those cases which have the best expectation of benefit from home care and those who have extenuating circumstances of one sort or another, making sanatorium care difficult at the beginning of their disease, may still have the benefit of treatment. These programs are best if they are incorporated into an overall program of control, case finding, treatment on out-patient and in-patient basis, as well as adequate follow-up studies later, keeping in mind at all times that the home treatment program is a compromise forced upon us by the lack of proper hospital facilities.

In line with these thoughts on home treatment programs, it is to be deplored that cases of tu-

berculosis are indiscriminately treated with various chemotherapeutic agents without proper control, such as sensitivity tests. It is with alarm that we view the very sizeable percentage of newly discovered cases that have resistant organisms initially, suggesting their infection came from older patients who have become resistant while under chemotherapeutic regimens. If this condition is allowed to continue uncorrected and uncontrolled, it is easy to visualize in the foreseeable future diminishing returns from the use of the chemotherapeutic agents to the point of their total uselessness.

The widespread use of steroid therapy involves very definite hazards in regard to tuberculosis. In a candidate for steroid therapy an attempt should be made to establish the presence of previous tuberculous infection; and, if present, this patient must be followed closely and, in many cases, "covered" with antituberculosis drugs. Any case of reinfection tuberculosis, regardless of how well healed, should be covered. Any primary focus or positive skin test should be followed carefully.

During the past decade the fight against this public health menace has been marked with notable successes. These advances have caused a considerable decrease in mortality and has brought the goal of eradication or complete control within sight. Regrettably, this very success has caused a tendency to lag in effort and enthusiasm in many quarters. The tendency to think of the fight as having already been won seems comparable to the football player with a clear field ahead of him deliberately stopping on the five yard line merely because the goal is so close. Just as in football games, the points are awarded only after the ball has been carried across the goal line, and no rewards are made according to the nearness in approaching the goal line; so in tuberculosis, progress is in no way synonymous with control. It must be kept in mind that the decrease in mortality is not followed by a comparable decrease in morbidity, and the promise of actual ultimate success must spur us to continue using, with all zeal at our command, all of the tools presently known to be effective in combating this disease.

It is felt that an improvement in understanding of the problem among professional personnel is desirable. Therefore, it is felt that interns and residents should have an adequate period of training in the proper diagnosis and treatment of tuberculosis and that qualified hospitals in the various sections of the state designed for the diagnosis and treatment of this disease should be utilized in such training.

In like vein, the committee wholeheartedly endorses the present affiliation program, as conducted by the Nursing Division of the University of Alabama, in giving proper training to student nurses, as well as the program set up by the same department for postgraduate study.

RECOMMENDATIONS

1. That the quality of tuberculosis care in the state be not allowed to deteriorate because of lack of financial support, but that the quality of service continue on the present level or improve by increasing support sufficiently to compensate

for the increase in cost which all hospitals are facing. These increases of cost reflect the increases in all supplies, including foods, drugs, and surgical materials, as well as the increasing cost of personnel.

2. That funds saved from the diminished use of out-patient pneumo refill service be rechanneled into use for continuation of out-patient chemotherapy following hospital discharge and for a stepped-up case finding program.

3. That the Association give careful consideration to the concept that recalcitrant patients who refuse hospital care forfeit their right to therapy free of charge on an out-patient basis by virtue of their refusal to accept hospital care at public expense to the point of maximum benefits.

4. That educational programs in dealing with tuberculosis affecting interns, residents, and nurses, both undergraduate and graduate, be encouraged.

Robert K. Oliver, *Chairman*
W. J. Tally
Arthur J. Viehman

Physician-Druggist Relationships

Due to the lack of necessary business to be transacted and to the inconvenience of getting committee members together, this committee has not held a formal meeting this year. However, the committee chairman has, on several occasions, had discussions pertaining to our committee activities with the Executive Secretary of the Alabama Pharmaceutical Association. It is planned that, if possible, this committee will hold a joint meeting with the committee of the Pharmaceutical Association sometime before the April meeting of the Medical Association of the State of Alabama. Providing this meeting is accomplished, a supplementary report will be rendered concerning the business, problems and recommendations discussed.

At this time, the committee would like to make the following recommendations. The first two are the same as were made in last year's report, but the committee feels that they should be repeated.

RECOMMENDATIONS

1. That all County Medical Societies have at least one joint meeting each year with the druggists of the county. This would preferably be a social meeting so that the physicians and druggists could discuss their problems, get better acquainted, and have a good time together.

2. That all physicians have a friendly talk with their druggists and attempt to persuade them against selling prescription items over the counter, especially barbiturates, amphetamine items, antibiotics and injectables.

3. That the President, at least one other member, and the Executive Secretary of the Alabama Pharmaceutical Association be invited each year to attend the annual meeting of the Medical Association of the State of Alabama. This invitation should be tendered by either the President or the Executive Secretary of the Medical Association, and the President of the APA or his representa-

tive should be included in the program and be invited to speak to the Association assembled.

4. That this Committee on Physician-Druggist Relationships be abolished and discontinued as a separate committee and the activities of this committee be made a part of another committee such as the Committee on Public Relations.

A. J. Treherne, *Chairman*
R. C. Bibb
Andrew D. Henderson

Anesthesiology

The Committee on Anesthesiology continues to report steady demand in this field. Several inquiries were received by the committee from out-of-state physicians who desire to locate in Alabama. Every effort will be made to find a suitable spot for any physician who is interested in coming to our state.

During the past year tremendous improvement was seen in hospitalization insurance in relationship to anesthesiologists. Yet, there is a great deal more to be desired. It is the hope of this committee to see that every company writing hospitalization insurance includes a fee for the anesthesiologists. The committee feels that in time the public will demand that such a fee be included in the contract.

The annual meeting of the Alabama Society of Anesthesiology will be held in Mobile on the evening of April 17th at the Battle House. Dr. Perry Volpitto, Professor of Anesthesiology at the University of Georgia, will be guest speaker. The committee is looking forward to a record turn out.

The anesthesiologists in the state have agreed on a fee for the Medicare Program. Everyone is eager and willing to cooperate to the fullest.

The committee again would like to extend an invitation to any physician in the state who would be interested in part-time training. The Medical College of Alabama and the Lloyd Noland Hospital, as well as private groups, offer this service.

Alfred Habeeb, *Chairman*
Alice McNeal
W. P. May

Industrial Medicine

It can be reported that during the past year advances have been made in the overall picture as regards industrial medicine in the State of Alabama. Briefly, three items are worthy of mention and are listed below.

1. A new course in industrial medicine is being offered for the first time this term at the Medical College of Alabama. The course is being taught by Dr. W. G. Thuss, Jr., a Birmingham physician and medical director of Hayes Aircraft Corporation. Dr. Thuss has the degree of Doctor of Science in Industrial Medicine from the University of Cincinnati, having graduated there in 1956.

2. The Birmingham Industrial Medicine Club was reactivated during this past year. This group is composed of physicians who are engaged

in some phase of industrial medicine in Jefferson County. An attempt will be made to enlarge this group to a state basis.

3. In May of 1956 the Jefferson County Medical Society appointed a special committee to review the program of the Industrial Health Council of Birmingham, Alabama. This committee has done an excellent job, has made recommendations and rendered an excellent report, a copy of which is attached.

C. L. Yelton, *Chairman*
W. G. Thuss
E. A. Isbell

The Industrial Health Council Birmingham, Alabama

Report of a special committee of the Jefferson County Medical Society to review the program of the I. H. C.

Introduction

For some time there has been rather widespread discussion among the members of the Jefferson County Medical Society concerning the activities of the Industrial Health Council.

It was apparent that there was general lack of information and misinformation regarding its origin, its purposes and its functions, and certainly a desire for more accurate knowledge concerning it. These facts became known to the Medical Advisory Board of the IHC, its Board of Directors and others concerned.

On May 23, 1956, a request was received by the president of Jefferson County Medical Society from the IHC Medical Director asking that a committee be appointed from the Medical Society to review the program of the Council.

Accordingly, the following committee was appointed to carry out these objectives: Dr. G. J. Roscoe, Chairman, Dr. John McMahon, Dr. Richard Carter, Dr. P. A. Morgan, Dr. Brooks Cotten, Dr. Harold E. Simon, ex-officio member as chairman of Public Activities Committee, and Dr. Bert Wiesel, subcommittee chairman of Advisory to Public Medical Agencies, also ex-officio member.

In order to gather information and to carry out this objective, this committee has held numerous meetings with various members of the Medical Society and others. These have included the former medical director of the Council, the members of the Medical Advisory Board, the president and members of the IHC Executive Committee and some of the medical members of the Board of Directors of the Council, as well as a number of physicians who, because of their interests or specialized knowledge, it was thought could aid the committee in its work. One open meeting of the Jefferson County Medical Society was held.

History and Organization

History

The Industrial Health Council was organized in 1946 and started operation April 1, 1947 as a non-profit Association. Active in its formation were representatives of industry, members of the

Birmingham Chamber of Commerce, members of the Jefferson County Public Health Department, and a small number of additional members of the Jefferson County Medical Society.

"The primary objective of the Council," according to its constitution, "is that of health education, case finding, medical evaluation of pathology as discovered by field services and the proper referral of individuals to the physicians of their choice. It is not the purpose of the Council to make definite diagnosis or to make available treatment measures."

Its constitution then proceeds to enumerate in detail the services it intends to furnish. These include an enumeration of certain tests, to make available preemployment examination for members, provided this service does not replace similar professional services already furnished, to provide some further services as may be authorized by the Board, etc.

Organization

In its organization the Council consists of all firms applying and approved by the Board of Directors or the Executive Committee. The Board of Trustees consists of the chief executive of the respective member firms.

The Board of Directors consists of 21 members of the Board of Trustees and 6 members of the medical profession, 3 appointed by the president of the Medical Society and 3 elected by the Board of Trustees; the health officer is an ex-officio member.

An Executive Committee is provided to carry on the work between meetings of the Board of Directors. An Executive Director is appointed by the Board of Directors who shall under their direction, supervise the operation and affairs of the Council.

A Medical Advisory Committee consists of the 6 medical members of the Board of Directors, the Jefferson County Health Officer, and the Medical Director of the Council.

At the outset, some nine companies participated in the Council. Mr. John K. Williams served as Executive Director until his resignation August 3, 1956. Dr. W. G. Paul left the Council services as Medical Director on September 28, 1956 and a part-time Medical Director was chosen.

At the present time there are some 250 participating companies located in the greater Birmingham area. Approximately 40,000 employees receive the services of the Council.

The Council staff consists of some 14 people. The Executive Director has been in charge of the business and promotional aspects of the organization, the medical director directs the medical aspects of the program; three people constitute the clerical staff, there is one laboratory technician and eight nurses and technicians for field work. Mobile equipment is used for field services. Screening in the field is done at the offices and plants of member firms. Laboratory procedures are carried out at the IHC offices.

Activities of IHC

The following is a resume of information ob-

tained by the committee from members of JCMS, the IHC Executive Committee, IHC Medical Director and others who cooperated.

IHC provides annual multiphasic screening for some 40,000 employees of 250 member firms, office rechecks if a question of an abnormality arises. Preemployment physical examinations are at present conducted for a limited number of member firms.

At one time the Council had an active educational program. It published a periodical called "Manpower," and also pamphlets on various phases of multiphasic screening and posters for the plants. This phase of the Council's activity has been very limited or non-existent for many months.

Multiphasic screening has included chest x-ray, blood pressure determination, VDRL blood test, hemoglobin estimation, urinalysis, eyesight tests, hearing tests, three-lead electrocardiogram and, if an abnormality is shown, a six or twelve lead EKG.

At one time the program included thymol turbidity liver function test, a blood serum check for prostatic cancer, and "a multiple pattern screener to find certain brain tumors and pathology." These appear to have been abandoned.

Reports of findings are made to the screenee who is advised to see his personal physician if an abnormality is indicated. Results of preemployment screening tests and examinations are reported to the company.

When the screenee is advised to see his physician for one reason or another, the Council sends his doctor a form requesting him to advise the Council of his final diagnosis.

While the Council was formed to serve industries of the Birmingham District, its buses and personnel have gone into other counties of Alabama and into adjacent states. Negotiations were under way to contract for annual examination of state employees at Montgomery, but this was halted when the Board of Directors became aware of it, and the solicitation of new members on a commission basis, apparently without the knowledge of the Board of Directors, was discontinued.

Under the constitution there appears to be no limits to the groups that can be served by IHC. Now included are a group of postal employees and a group of the Jefferson County Health Department. However, it appears that it was the intent of the Council to limit membership to small industries in the Birmingham area which had no medical set-up of their own.

On occasion, physical examinations have been performed on executive personnel of some member companies.

The field and laboratory tests are performed by non-registered technicians. The former IHC Medical Director felt that the quality of the work was good, and it was performed under his supervision.

The County Health Department does the VDRL tests for the Council as it will do for any private physician, but performs no other services for it at present.

The Council derives its income from participating concerns who pay at the rate of \$3.30 or \$3.65 per employee per annum or \$4.00 if pre-employment examinations are done and \$5.00 if more than 15 per cent of the group has pre-employment examinations. Some money has been received in grants and for some years the director received income from the County Health Department as a health educator and one other employee was carried by the Health Department as a trainee. This practice was discontinued more than a year ago.

The County Health Department has helped obtain the loan of a U. S. Public Health Department x-ray bus, through the State Health Department, for use by the Council.

The budget now runs around \$95,000 a year.

Promotional Material

The preparation of the promotional material has not always been under the control or direction of the medical director. Some of this promotional material was reviewed. Excerpts from one of these pamphlets state:

"While this service program is not the equivalent of a full medical examination there is sound reason to believe that it will add 10 years to the working life of the average employed person."

Further excerpts from the pamphlet state that the Council will provide: "Chest x-ray for heart pathology and lung cancer, clinic service; second x-ray, electrocardiogram, urinalysis and physical examination by physician for those who need it."

"Nutrition tests-hemoglobin determination. Clinic service: second test and other diagnostic service—medical consultation."

"Liver function (thymol turbidity) tests with needed medical evaluation and service." "Medical history including weight and height." "Electrocardiograms for all employees 40 years of age and older . . ." (no differentiation between the 3 lead screen type EKG and what is understood by physicians as an electrocardiogram).

"A multiple pattern screener test to find certain brain tumors and other pathology. Medical evaluation and referral."

"Results for management claim less absenteeism, fewer accidents. Reduce insurance costs for illness and compensation. A preventive medical program will reduce the cost of dependency and indigent medical and hospital care. Taxation for this purpose will be less. Stabilize our economy by protecting earning power of employed persons and the profit making ability of industry and business, etc."

It was brought out that a very high percentage of employees have the idea that they are getting a complete physical examination. Very little effort apparently has been made to discourage that notion. The IHC Board has authorized a placard on buses and a leaflet for examinees stating that they are getting screening tests and not complete physicals.

The opinion was expressed that an educational approach rather than a highpowered promotional effort is needed.

There have been no statistical studies of the value of the screening tests. Up to 1955 the record system was such that it was impossible to obtain this information. An IBM system has recently been installed for the purpose of carrying out statistical studies.

Throughout the course of the study it was brought out repeatedly that the responsibility of interpreting and carrying out the policy of the IHC was left largely in the hands of the executive director and was all too often not kept under the close supervision of the Executive Committee and/or the Medical Advisory Board, as was intended. It was further ascertained that the medical director was at times overruled by the executive director in matters of medical decisions. Because of the lack of action and close supervision on the part of the Executive Committee and the Medical Advisory Board, it was felt that it has been possible for the executive director to extend his activities beyond the limits intended.

On July 25, 1951, the Jefferson County Board of Health (which is also the JCMS Board of Censors) endorsed the program of the Industrial Health Council "to provide services for the smaller industries." Again, on January 20, 1954, the Board of Health endorsed "the present policies and practices" of the IHC and recommended employment of a full-time medical director. As far as could be ascertained the IHC program has never been presented to the Jefferson County Medical Society for consideration or approval.

Each screenee now is provided with a leaflet explaining the purposes and functions of the IHC, which is a great improvement over the previous publicity material Exhibit 4.

Comments on Management of the Council

At the various hearings and in response to inquiry by the committee, many comments on the Industrial Health Council were received.

These ranged from the opinion that the Council should be abolished altogether to the view of those who felt there is a place in the health picture for IHC if it is constituted and operated within the bounds of sound medical procedures and good ethics.

The legality of the organization was considered but the committee found there had been no test case to establish a precedent by which the IHC's activities could be measured.

Courts generally have construed that only a licensed doctor of medicine may practice medicine and, of course, the Principles of Medical Ethics proscribe any practice which permits the exploitation of the service of a doctor of medicine by an individual group or corporation.

After some two years experience with a medical director, some members of the IHC board feel that there is no need for a medical director or supervisor.

At the same time, some physicians have raised the question of whether businessmen want screening tests to pick up diseases as a service to the employee and community, or simply want

to supply "cheap medicine" to employees as a fringe benefit.

Most of the concern expressed by physicians, however, has been because of the erroneous idea widely prevalent among employees that they were being given complete physical examinations and that this impression, in fairness to them, should be corrected. The "complete physical" idea had apparently been fostered misguidedly by one or more council employees who felt that plant workers would not respond to a call for mere screening.

A number felt that the IHC Medical Advisory Board has not been as active as it should have been nor had it reported to the Society as often as desirable. One or more members of that Board itself shared that feeling.

A suggestion was made that the management would be strengthened through the services of a board of medical specialists appointed from the Society to work with IHC on medical standards, procedures, tests and evaluation of results.

It was suggested that participating firms have a medical advisor to whom the preemployment screening data be made available in order that he might relate it to the employee and the job requirements.

It developed that the IHC Board was not aware that Council personnel had solicited business over the state and was not familiar in detail with some of the promotional activities. The Executive Committee was in accord that non-industrial groups should not receive the service.

It was brought out by the members of the Executive Committee that it was not the intention of the IHC to extend its activities beyond those of multiphasic screening, that it was not its intention to provide services for more than local industry and the propriety and usefulness of the preemployment examinations was seriously questioned.

The members of the Executive Committee expressed their complete disapproval of executives of participating firms receiving any medical examinations or screening whatsoever through the IHC.

Conclusions and Recommendations

Your committee feels that the Industrial Health Council has departed in some degree from well established medical and ethical principles designed for the purpose of giving to the public the best medical and health service.

As previously brought out, these departures include the solicitation of clients, particularly as individuals and even on a commission basis; serving non-industrial groups; expansion beyond Jefferson County; over-enthusiastic and misleading promotional material; giving screenees the idea they are getting complete "physical examinations"; executives receiving physical examinations; and some doubt as to the propriety of using equipment "loaned" by the Public Health Service, particularly in view of their use in preemployment examinations.

The committee concedes that in the broadest sense the service of IHC as concerns multiphasic

screening may be construed as public health activity since a person who becomes ill and out of work may become or is a public health problem. The actual value of this service, however, is as yet undetermined.

The subject of multiphasic screening has been made the object of several studies and as yet there has been no unanimity of opinion arrived at by the industrial groups, groups studying chronic disease and others interested.

The Baltimore study (JAMA Aug. 11, 1956-1442-46) states that, "Published opinion on the value of multiple screening varies from enthusiastic endorsement to complete condemnation," and they conclude that "multiple screening is a procedure of promise."

In order that its program may conform to the best interest of public health objectives and good medical practice, the following recommendations are made:

- (1) That the purpose and powers as defined in the Constitution be limited to screening, education and proper referral in accordance with recognized medical practice.

Further, the purpose of "providing such further services as may be authorized by the Board of Directors" should be definitely restricted to screening and education services recommended or approved by the Medical Advisory Board (III-6).

The committee specifically takes exception to the inclusion of any provision that will permit the making of preemployment examinations since this constitutes the practice of medicine and does not properly fall within the province of a screening service. To do so would also permit utilization of equipment provided by the U. S. Public Health Service and other services provided for public health objectives to be used for the economic and financial benefit of individual industry.

- (2) There should be a Medical Advisory Board to direct medical policy, along the lines of the present one. The members should be chosen with care to include those with varied interests and qualifications, such as internists, pathologists, those interested in industrial practice, radiologists, surgeons, and others. In addition to the Medical Advisory Board, the creation of a panel of specialists to be known as the Professional Service Group might be advisable, whose function it would be to advise on an academic level concerning various phases of multiphasic screening—also to advise on the evaluation and analysis on statistical data obtained, this latter group to receive remuneration.

The Medical Advisory Board should present a written report personally to the Board of Trustees of the County Medical Society and a copy of the Board of Censors at least twice yearly, at the January and July meetings.

- (3) The Committee feels that some type of direct medical supervision is essential, a part-time director would be the minimum and a full-time director a more desirable arrangement.

- (4) All decisions relating to medical matters should have the approval of or be recommended

by the Medical Advisory Board and the medical director with the aid and advice of the Professional Service Group. This includes the selection of and the means of carrying out the various tests as well as approval and control of all educational and promotional matters, pamphlets, contracts with employers, etc.

It is evident that the framers of the Constitution intended that "It shall be the general policy of the Board of Directors that all measures for applying medical knowledge for conservation of health of the employees of the members of the Council shall have the approval of the Medical Advisory Committee.

Nevertheless, violations and abuses of good medical practices apparently did occur and occurred for the most part because the ultimate and final control of promotional and educational work in practice was held by non-medical personnel rather than by medical.

The committee calls particular attention to misleading information and lack of specific information in the promotional and educational material available for study by the committee.

(5) It is recommended that no physician employee of the IHC should hold a seat on the Medical Advisory Board, or Board of Directors, including the medical director.

(6) It is recommended that preemployment physical examinations be eliminated upon fulfillment of present commitments, but that screening tests be permitted on candidates for employment upon certain conditions. To qualify for preemployment screening, a company must have a stated medical examiner of its own and of its own selection. The results of such screening tests could then be made available to said medical examiner and the screenee's personal physician, but not to the employer directly. To do otherwise would be a violation of medical ethics and probably of the law.

Your committee particularly stresses the recommendation that all phases of the practice of medicine except screening and education be eliminated from the IHC and points out that preemployment examinations and physical examinations of executives do constitute the actual practice of medicine for the economic benefit of individual or industry and are an abuse of the principles under which the IHC was established and at variance with its announced purposes.

If these activities are permitted as they are under the present wording of the constitution or in practice, then by projection, such as organization (the IHC) could conceivably enter into the practice of medicine in any or all of its phases for anyone, anywhere, at any time.

When an individual submits to a multiphasic screening, it is a benefit to himself within the scope of public health and preventive medicine. In such an instance multiphasic screening falls within the context of case finding for chronic disease for the benefit of the individuals and the public.

On the other hand, when the facilities of the council are extended to include procedures such as preemployment examinations, examinations for executives, etc., the question arises of

whether or not the Council abrogates its stated philanthropic and public health objectives in order to become a dispenser of a medical commodity for the economic benefit for the participating industries.

(7) The question of use of taxpayers' money was considered and it was brought out that the buses were "loaned" by U. S. Department of Health through state and county health departments. This would certainly seem appropriate only if the functions of the Council were strictly limited to multiphasic screening and education on a non-profit basis.

It was brought out that the use of space in the Public Health Building is being paid for at the usual rate. Use made of public health tests is permitted to the same extent that such tests are available to any citizen through his regular physician, which seems appropriate. The payment of a salary by the state or Public Health Department to any employee of the IHC does not appear to be in the best public interest. Such practices do not appear to be in use now.

(8) Your committee feels that the IHC was conceived with the best of intentions as a philanthropic and public health service to employees of local industry. Your committee further is of the opinion that certain abuses and errors in administration have arisen as a result of excessive enthusiasm on the part of the executive director, the lack of interest and diligent supervision on the part of the Medical Advisory Committee and the executive mechanism of the IHC itself. During its study it has become amply evident to the committee that the Executive Committee of the Council was only too eager to solicit help and accept guidance from the medical profession.

The committee feels that the IHC's activities strictly limited to multiphasic screening have a definite place in the public health program of this community.

(9) Your committee recommends that the program recently initiated by the former Birmingham IHC Medical Director to study the value of its work statistically be continued. There are apparently not available at this time any such studies upon which conclusions can be based. The very optimistic claims made in some of the promotional material seem open to question without statistical evaluation of results.

(10) The committee wishes to express its appreciation for the cooperation which it has received from the executive committee of the Council and its president, the former medical director, as well as many physicians, members of JCMS, in gathering the foregoing facts and it wishes to reemphasize its faith in the good intentions and public spirited objectives of the members of the IHC which led them to initiate and activate this organization.

It must be remembered that to fail to support and guide a non-profit, philanthropic organization of this character might well open wider the door for uncontrolled and undesirable groups to

enter into this and similar fields of medical service.

Jefferson County Medical Society
Industrial Health Council Study
Committee

G. J. Roscoe, M. D., *Chairman*
H. Brooks Cotten, M. D.
Richard D. Carter, M. D.
John M. McMahon, M. D.
P. A. Morgan, Jr., M. D.
Harold E. Simon, M. D.

Medical Care for Industrial Workers

Since the 1956 meeting of the Association your committee has met several times in an effort to work towards an agreement with the United Mine Workers Medical Care Program according to the provisions which were adopted by the Association at the last annual meeting. Our duty was to attempt to arrive at an agreement between the Medical Association of the State of Alabama and the Medical Program of the United Mine Workers Welfare and Retirement Fund similar to one which had been worked out by the Pennsylvania Medical Society. (See pages 17, 18, 19, and 36 of 1956 Transactions M. A. S. A.)

In the fall of 1956 our written proposal was sent to Dr. Warren F. Draper, Executive Medical Officer of the UMW Fund. In a letter dated November 21, 1956, Dr. Draper notified our committee that the House of Delegates of the Medical Society of the State of Pennsylvania on October 23, 1956 had terminated their agreement. He suggested that we ascertain the specific reasons which caused the termination. He further indicated that until all the factors involved were known he was not disposed to enter into an agreement with another state.

In January 1957, it came to the attention of your committee that the Secretary of the Illinois State Medical Society notified the mine union leaders that as of January 1, 1957 physicians there would stop recognizing the Fund as far as billings were concerned. In other words, doctors were to bill beneficiary patients direct and the latter would have the responsibility of seeking reimbursement from the Fund.

At a meeting of the committee on January 30, 1957, it was decided to submit this report as given above to the Secretary-Treasurer of the State Medical Association on the February 1 deadline. A supplemental report will be necessary during or before the 1957 state meeting. The committee plans a meeting for March 6, 1957, in Birmingham, inviting members of those County Medical Societies where the UMW Fund operates to attend. The committee felt that this was highly desirable because of some of the recent events noted above and also to obtain more current opinions of as many members concerned as possible.

SUPPLEMENTAL REPORT

Subsequent to the preliminary report submitted by this committee on January 31, 1957, another communication was received from Dr. Draper. He stated that, in spite of repeated inquiries to the responsible authorities in Pennsylv-

vania regarding their action in suddenly canceling their agreement with the UMW, "no explanation, as far as I know, has ever been forthcoming." He further stated that: "In view of our experience with an agreement reached and carried out by us in good faith in Pennsylvania, and the outcome of our negotiations with the Medical Society of Illinois, I am constrained to believe that an agreement between a state medical society and the Fund not only fails in accomplishing the purposes for which it was intended but, on the contrary, affords a basis for discord and dissension to the embarrassment and discredit of those whose good offices were devoted to constructive efforts." He continues: "As far as an agreement with the Medical Society of the State of Alabama is concerned, I can see nothing that could be accomplished by a signed agreement that could not be just as well achieved by thorough understanding and cooperation between your Liaison Committee and the Area Medical Office of the Fund. . . . Constructive suggestions as to changes in major policy will be welcomed at any time and carefully considered."

On March 6, 1957 your committee held its open meeting in Birmingham with members of the Societies in the counties in which the Fund operates. Some twenty-five attended. There was lack of optimism regarding further discussions along the present lines. There was reemphasis on the continued failure of fees paid by the Fund to measure up to the existing levels of acceptable fees in the various communities. Likewise, there was again stressed the completely unilateral method of choosing physicians by a third party. This results in a restriction of the choice of physicians to a prescribed list. One suggestion was that the Blue Cross-Blue Shield arrangement with the United Steelworkers of America seemed to be eminently more satisfactory than the program and rules of the Fund since each one of their beneficiaries do have free choice of physicians and hospitals.

Officials of the Fund have repeatedly indicated: "All that we ask, or have ever asked, is that the best quality of medical care available be provided to our beneficiaries at a cost that is reasonable and just according to accepted standards of medical practice." Your committee strongly doubts that this goal can be accomplished or maintained over any period of time without the free choice of physician by the individual Fund beneficiary, or when it is suggested to the physician that he reconsider the amount of his usual fee for his services or if he is expected to render the service for less than the usual charge that other patients in the same community pay for the identical service.

In view of all these developments, your committee is of the opinion that further discussions with representatives of the Fund regarding an agreement on the state level will not serve any good purpose at this time. It is recommended that the liaison committees on a county level continue to function. It is further felt that these matters could better be taken up and resolved on a national level. To this end the committee recommends the adoption of the following resolution to be submitted by our delegates to the American Medical Association:

Whereas, The Medical Association of the State of Alabama has been pursuing discussions with representatives of the Fund of the United Mine Workers of America to the end that more satisfactory arrangements for both parties could be mutually arrived at and certain problems be resolved, and

Whereas, Certain points of difference continue to exist which involve fundamental principles of vital concern to the medical profession as a whole, and which involve, among other things, freedom of choice of physician by the patient, the maintenance of satisfactory fee levels, certain reservations in regard to the retainer fee method of payment, and third party intervention in doctor-patient relationship, and

Whereas, discussions having as their objective the resolution of these and other problems on a state level have failed to materialize in several other states and further progress on this level in Alabama seems at this time to be doubtful, now therefore be it

Resolved, That the delegates of the Medical Association of the State of Alabama to the American Medical Association be instructed to recommend to that organization that they, through their Council on Industrial Health or other appropriate channels, do formulate and reaffirm pertinent fundamental principles for the medical profession which would stand to serve as a basis to guide the constituent bodies of the A. M. A. in their relationships with various groups such as the U. M. W. Fund which are involved as a third party in providing medical services to industrial and other groups.

E. B. Robinson, Jr., *Chairman*
J. M. Donald
L. H. Hubbard
A. C. Jackson
T. J. Payne
H. E. Simon
J. E. Wood

Blue Cross-Blue Shield

Your representatives on the Executive Committee of Blue Cross-Blue Shield of Alabama appreciate this opportunity to report to you some of the activities of that organization in 1956.

In spite of the fact that the corporation found it necessary to increase subscribers' membership dues during the year because of increased hospital costs, as well as increased utilization of the medical-surgical plan, membership in Blue Shield increased by approximately 25,000 members, and in Blue Cross by approximately 22,000 members. These additions brought the total Blue Shield membership to 623,979 and the total Blue Cross membership to 668,947 members as of December 31, 1956.

In 1956 Blue Cross paid over 98,000 hospital claims. These claims amounted to in excess of nine million dollars. Over 50 million dollars has been paid to hospitals since the plan was organized in 1936.

Blue Shield paid over four million dollars to physicians during the year, representing in excess of 131,000 claims. This amount was dis-

tributed among 1701 physicians practicing in 67 counties. The payments ranged from a low amount of \$23 paid to two physicians in one county, to a high amount of almost \$1,850,000 paid to 558 physicians in another county. From the time Blue Shield was organized in 1946 at the request of our State Medical Association, the corporation has paid in excess of 24 million dollars in Blue Shield benefits. This is considerably more than the combined amount paid for similar benefits by all commercial insurance companies operating in the state of Alabama.

The amount paid to hospitals and physicians in 1956 represents 89.2% of total earned income. Operating expenses for the year were 6.9%. The balance is available for future hospital and medical-surgical services.

During the year 1956, Blue Cross-Blue Shield developed a \$25 deductible hospital certificate. This certificate is being offered to employed groups of five or more people. This program seems to be very popular with small groups and, in the short period it has been in effect, over 500 Alabama firms have selected this type of coverage for their employees.

To provide our colleagues with informational material about Blue Shield, we developed in December 1956, a bulletin entitled "Briefs." This newsletter will be sent to you periodically and will contain information of the Alabama plan, as well as activities of other Blue Shield plans which we feel will be of interest to you.

Progress was made last year in the development of a new in-hospital medical benefit program. Blue Cross-Blue Shield of Alabama was asked by a large corporation to develop a higher surgical schedule with the following in-hospital medical benefits: \$15 for the first day of hospital confinement; \$10 for the second day of hospital confinement; \$4 for the next eight days of hospital confinement; \$3 per day for each additional day up to 110 days of hospital confinement.

At the present time the only interest in this type of coverage is from large groups of employees where the employer contributes a high percentage of the cost. In Alabama 85% of the subscribers of Blue Cross-Blue Shield are enrolled in groups of less than 25 people. In 80% of these groups the entire cost is borne by the employee.

We, as physicians, should always bear in mind that the willingness and ability of the public to pay will always determine the type of benefits that can be offered by Blue Cross-Blue Shield.

Our Blue Shield plan enjoys a vital relationship with its creator, the Medical Association of the State of Alabama, as it is basic in Blue Shield that matters of medical practice be determined wholly and completely by the medical profession. Your representatives on the Executive Committee of Blue Cross-Blue Shield of Alabama have full control over all matters pertaining to the practice of medicine. We would also like to call to your attention again the fact that Blue Shield is not only the physician's own plan, but the only medical-surgical plan operating in the state of Alabama that is officially endorsed by our State Medical Association.

Because of the close relationship between Blue Shield and the medical profession, the public expects you as a physician to be familiar with, and understand, its function. The acceptance by the public in Alabama of Blue Cross and Blue Shield is certainly evidence it approves of the idea that was conceived by the medical profession.

In our philosophy it is fundamental that problems in the health field will best be solved through private enterprise rather than by government, through voluntary means rather than through government compulsion. Your Blue Shield Plan may not be all that you would like it to be, but it is yours—to strengthen and improve. It is the medical profession's best answer—so far—to the challenge confronting the profession, to prove that we can solve our own problems by voluntary co-operation with industry and the public. What Blue Shield may become in the future will depend largely on the attitude of our profession in Alabama.

Blue Shield was born of a necessity in an age of unstable and changing economy and has survived and grown in the face of these conditions which are becoming more and more uncertain. Blue Shield was never intended to furnish complete and all inclusive payment of fees for any and every service rendered. The organization has always been conscious of its inability to provide all services that have been demanded, and it has made adjustments in that direction as rapidly as sound actuarial guidance and experience of the plan would permit.

Your committee on the Executive Committee of Blue Cross-Blue Shield has not attained the stature of top flight experts in this field of endeavor, but it has learned a few things about what, why and how an enterprise of this character should be operated.

The members of the committee have open minds and will appreciate suggestions from any member, or any group of members of organized medicine in Alabama. The committee realizes there is much to be accomplished before the plan can give the type of service expected by the public and the physicians. We may never attain these goals but we will continue to strive toward them.

The committee is not unmindful of the fact its conduct can and may be commended or condemned by the parent body which set it up. However, it feels the magnitude of its task and the amount of time required in performing its duties is sufficient to merit a status of permanency in the Association, thereby increasing its feeling of security among its peers.

Your committee hereby expresses its thanks to you for the honor of having represented you to the best of our ability on the Executive Committee of Blue Cross-Blue Shield of Alabama for the year 1956.

Respectfully submitted,
J. G. Daves, *Chairman*
Luther Davis, Jr.
J. H. Baumhauer
H. S. Bartlett
Gordon M. Hankins
Robert H. Mason

Committee of Publication

Douglas L. Cannon, *Chairman*

The monthly circulation of the Journal on December 31, 1956 was 2,250. Receipts from advertising, non-member subscriptions and other sources were \$16,793.69. Cost of publishing and distributing was \$19,302.94.

Cost of printing and mailing the 1956 Transactions to the members of the Association was \$2,122.62, a part of which (\$147.50) was recovered through sale of rosters of the physicians of Alabama.

SPECIAL COMMITTEES

Insurance

At the 1956 annual meeting, the Association authorized this committee to consummate plans to make available group health and accident and also professional liability insurance for the members of the Association.

Shortly after the annual meeting the Liberty Mutual Insurance Company furnished the Association with master policies which were written especially to meet the needs of our organization.

Approximately 650 of our members have availed themselves of the opportunity of taking this group health and accident insurance, and about 525 are covered by the group professional liability insurance. The health and accident insurance became effective on August 1, 1956, and the professional liability on September 15, 1956.

Of course, these insurance plans have not been in operation a sufficient length of time to determine how they will work out; but to this time, they are apparently functioning to the satisfaction of all concerned.

J. O. Morgan, *Chairman*
Victor T. Hudson
Ben M. Carraway

Coroner System

Historically, the problem of the proper performance of medicolegal autopsies has been with us for many years. This committee, appointed in 1954, has diligently studied the problem and has made certain recommendations. In 1951, a similar committee, composed of Drs. James R. Garber, G. O. Segrest and Marcus Skinner, recommended and included in its report a model law. To date the Association has approved the recommendations of both committees unanimously, but to our knowledge nothing further has been done to activate these recommendations.

This committee realizes the difficulties in changing a law already on the statute books and has tried to work out a partial solution with the Department of Toxicology and Criminal Investigation. These attempts have met with resistance and have failed. We are convinced that it is not possible to find a solution to this problem under the present law.

Therefore, we recommend:

1) That the Association charge the legislative committee with the responsibility of drafting a new law, or amending the present law to con-

form with the principles expressed in the resolution presented by Dr. Garber's committee in 1951.

2) We also recommend that the Association realistically appropriate sufficient funds to provide necessary legal and other help to draft and secure passage of such a law.

In the event that these recommendations are accepted, the members of this committee have expressed willingness to aid the legislative committee in the bringing of this worth-while endeavor to a successful conclusion.

J. A. Cunningham, *Chairman*
Brooks Bishop
J. S. P. Beck
I. M. Wise
Earl B. Wert

American Medical Education Foundation

Contributions to the American Medical Education Foundation for the year 1956 were more than in any previous year. Our campaign was more or less concentrated in September, October and November.

Letters were sent to the president and secretary of each county medical society the latter part of September urging that they encourage contributions from the membership and at the same time suggesting that a donation be made by the society itself if there were funds available. In the October 1, 1956 issue of PR Notes a reminder was given on what was contributed last year, and an appeal for contributions was made. On October 9, 1956 a letter was sent to the full membership of the Association asking for contributions.

In the December 1, 1956 issue of PR Notes another appeal for contributions was made, and a return envelope was enclosed along with a folder telling of the importance of helping medical education. A mailing from the national office of the American Medical Education Foundation to all doctors was sent out at about this same time.

During 1956 one hundred seventy (170) contributors gave \$7,182.70. This compares favorably with the \$5,355.75 from one hundred thirty-nine (139) contributors in 1955.

The contributions for this year may be broken down as follows:

Southern Medical Association.....	\$1,000.00
20 Women's Auxiliaries.....	1,036.60
7 County Medical Societies.....	1,275.00
142 Individual Doctors.....	3,871.10

We would like to thank the individuals and organizations for these contributions and to ask the County Medical Societies again to encourage contributions. It is our feeling that a larger percentage of doctors in Alabama should contribute to this worthy cause.

H. G. Hodo, Jr., *Chairman*
B. Dowling Petrey
E. L. Gibson
Julius Michaelson

Revision of the Constitution

The committee proposes the following changes in the Constitution and By-Laws of the Association:

Constitutional Changes

1. Amend Article II by striking therefrom paragraphs numbered (2.) and (3.), and by renumbering succeeding paragraphs.

Comment: These paragraphs set forth as two objects of the Association to secure careful and reliable accounts of the endemic and epidemic diseases of the state; and to encourage the study of medical botany, medical topography, and medical climatology of the state.

It is believed that these objects of the Association may now be repealed.

2. Amend Sec. 4 of Article IV to read as follows: Sec. 4—All members who have been members in good standing of a county medical society in Alabama for ten consecutive years immediately preceding any election to fill vacancies in the several offices of the Association shall be eligible for nomination and election to any office in the Association.

3. Amend the first paragraph of Subsection (3.) of Sec. 13 of Article VI to read as follows: (3.) To attend and register as counsellors at at least two out of every three annual sessions of the Association, unless excused by the State Board of Censors for good and sufficient reason.

Comment: In the present Constitution it is a duty of a counsellor to attend at least one annual session in three. The importance of the office demands more.

4. Amend Sec. 2 of Article VIII by adding thereto a second paragraph to read as follows: No member shall be eligible for reelection to the office of vice-president who has been elected to such office at any two previous elections; nor shall any member be eligible for reelection to the office of censor who has been elected to such office at any three previous elections.

Further amend Sec. 2 of Article VIII by adding a third paragraph to read as follows: No censor shall serve on any special or standing committee of the Association except as an ex-officio or advisory member without right to vote.

5. Amend Article X by striking therefrom subsection (3.) of Sec. 3, and by renumbering the succeeding subsection.

Comment: This subsection makes it a duty of vice-presidents to make monthly reports to the president of the Association. Since this has never been complied with, it would appear that the provision should be repealed.

6. Amend Article XIV by striking out the second paragraph of Section 2.

Comment: This permits a counsellor to pay his dues at the time of the annual session or within two months thereafter. Proposed amendment to the ordinance relating to dues of members and counsellors contained herein alters this provision. Therefore, the second paragraph of Section 2 of Article XIV may be stricken.

7. Amend Sec. 2 of Article XV to read as follows: Sec. 2—Graduates of reputable medical colleges granting the degree of Doctor of Medicine shall, under such terms as may be prescribed by the Association, be eligible for membership

in county medical societies, it being the intent that no one shall be eligible for membership in a county medical society who does not hold a bona fide academic degree of Doctor of Medicine.

8. Amend Sec. 6 of Article XV by adding thereto the following sentence: Said delegates shall be elected at the time of election of officers, if delegates are so chosen; if not, they shall be appointed by the incoming president immediately on assumption of office.

Ordinances

1. Amend Sec. 1 of ordinance entitled Sessions of the Association, and Order of Business Therein, as amended in 1949 to read as follows: Sec. 1—The sessions of the Association shall comprise three days, Thursday, Friday, and Saturday, the third Thursday in April being the first day of the meeting; provided, however, that if the session should coincide with Easter week, it shall be the privilege of the president and secretary of the Association, with the approval of the State Board of Censors, to designate the first, second or fourth Thursday as the first day of the meeting.

2. Amend ordinance entitled Dues of Members and Counsellors, as amended in 1956, by adding the following to Sec. 2: Every counsellor, except such as are exempt from payment of dues, shall pay his annual dues prior to each annual session or be dropped from the Roll of Counsellors.

Further amend the ordinance by adding a third section to read as follows: Section 3. Dues of interns and residents eligible for membership in county medical societies shall be \$10 annually for a period not exceeding three years, after which their dues shall be the same as in the case of other members.

3. It is recommended that there be a new ordinance entitled Time for Submitting Matters Requiring Consideration of the Association, the ordinance to read as follows: All reports of officers, all proposed resolutions and constitutional changes, and any other business requiring the consideration of the voting body of the Association in any given year shall be submitted to the Secretary of the Association by January 1 of that year to permit their distribution among officers, counsellors, delegates and county medical societies at least thirty days prior to the date of the annual session.

4. Amend ordinance entitled Districts and Duties of Vice-Presidents by striking out Sec. 4, and by renumbering the succeeding section.

Comment: This section calls for two divisional meetings each year. In 1956 the State Board of Censors recommended that each vice-president determine the feasibility of a meeting in his division. This being true it would seem that the requirement that there be two meetings in each division annually should be repealed.

5. Repeal ordinance entitled Committees of the Association and adopt a new one under the same title reading as follows: The following committees are hereby created, their establishment to be in accordance with the ordinance of the Association providing for the organization of

standing committees unless otherwise specified:

(1) Public Relations, composed of ten members so grouped that the terms of office of two shall end each year, and with the president, president-elect, secretary of the Association and the State Health Officer as ex-officio members.

(2) Medical Education and Hospitals, composed of five members.

(3) Medical Care for Industrial Workers, composed of seven members on a revolving membership basis elected by the Association at its annual meeting.

(4) Insurance, composed of five members.

(5) Constitution and By-Laws, composed of seven members, with the chairman of the State Board of Censors and the secretary of the Association as ex-officio members.

(6) Indigent Care, composed of five members.

(7) Legislation, composed of nine members, with the secretary of the Association, the State Health Officer and the executive secretary of the Association as ex-officio members.

(8) Rural Health, to be composed of five members.

(9) Emergency Medical Service, to be composed of five members.

(10) Veterans Affairs, to be composed of five members.

(11) Maternal and Child Health, to be composed of five members.

(12) Cancer Control, to be composed of five members.

6. It is recommended that there be a new ordinance entitled Special Committees of the Association to read as follows: There are hereby created special committees of the Association as follows:

(1) American Medical Education Foundation, to be composed of five members.

(2) Medical Advisory Board for the Alabama Society for Crippled Children and Adults, to be composed of nine members.

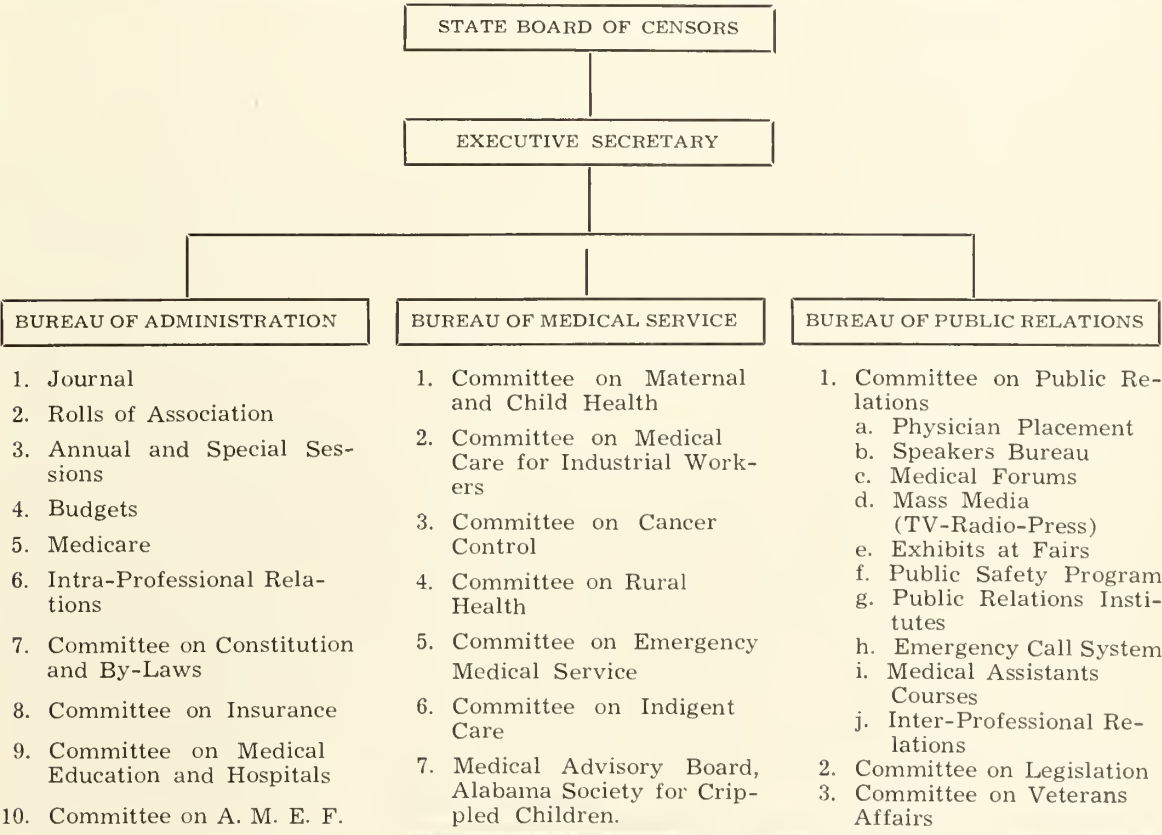
Comment: These recommendations for changes in the committees of the Association are in accord with action taken at the 1956 annual session. It will be noted that some of the many programs of the Committee on Medical Service and Public Relations, as formerly constituted, are being shifted to other committees and the Committee on Medical Service and Public Relations will be known in the future as the Committee on Public Relations. Among the changes in responsibilities of the various committees, it is proposed that the Committee on Public Relations assume the duties of the old Committee on Physician-Druggist Relationships as a part of its program in inter-professional relations, that the Committee on Medical Education and Hospitals assume the duties of the old Committee on Postgraduate Study as well as the Committee on Medical Service and Public Relations' present program of liaison with medical students, interns, and residents, that the Committee on Medical Care for Industrial Workers (formerly the Committee on Liaison, UMWA Medical Care Program) assume the duties of the Committee on Industrial Medicine, that the

Committee on Legislation assume the responsibilities of the Committee on the Coroner System, that the Committee on Rural Health assume the responsibilities of the Committee on Medical Service and Public Relations' present program of liaison with the Farm Bureau and Extension Service, and that the indoctrination program presently being prepared by the Committee on Medical Service and Public Relations be shifted to the central office as a part of intra-professional relations.

These recommendations should be supplemented with the knowledge that for administrative

purposes it is proposed to divide the work of the Association into three bureaus according to the accompanying chart.

W. R. Carter, *Chairman*
J. M. Weldon
J. O. Morgan
John A. Martin
W. S. Littlejohn
J. P. Chapman
E. G. Moore
Ex Officio
Douglas L. Cannon
E. V. Caldwell



Indigent Care

Your Committee on Indigent Medical Care held several meetings and devoted considerable time to correspondence between members and other interested physicians. It was unable to work out a plan to cover indigent medical care in the home or office because of lack of sufficient information. Therefore, the report of the committee is a proposed statement of criteria for an Alabama indigent care hospitalization program by the Medical Association of the State of Alabama.

Statement of Criteria
for an
Alabama Indigent Care Hospitalization Program
by the
Medical Association of the State of Alabama

Since the Legislature of Alabama has appointed an interim commission to study the indigent

medical care situation in Alabama and to make recommendations to the next general session, the Medical Association of the State of Alabama makes the following statement relative to certain aspects of any program that might be proposed.

1. The medical profession has always accepted its full responsibility for the care of the sick and injured among the indigent population, serving them to the best of its ability, but feels that every community should assume its share of this ever-present and pressing problem. It feels that, at present, medical services to patients under such a program should be rendered free of charge by the profession, but that the profession should be granted immunity from legal suits by disgruntled patients when the physicians have not been negligent.

2. The program should provide hospitalization in general hospitals for the indigent sick

and injured citizens, who can be helped by such treatment, but should not include domiciliary care or those specific diseases covered by existing programs, such as tuberculosis, cancer, and mental illnesses. Referral to larger medical centers should be possible in those special cases which cannot be properly handled in the smaller hospitals; and for certain accidents and illnesses, the problem of long term hospitalization for our aging population should be studied.

3. Eligibility for the program should not be restricted to those people who are indigent but should be extended to those citizens clearly unable to purchase needed hospitalization from their own resources or by those upon whom they are legally dependent.

4. The program should provide for paying the hospitals the actual cost of hospitalization of indigent patients but should not provide profits to the hospitals for care rendered.

5. Determination of medical indication for hospitalization should rest solely upon a licensed physician who examines the patient, this to be concurred in by the hospital staff.

6. Determination of financial eligibility for hospitalization under the program should be made by a non-physician agency. It seems to the medical profession that the question of financial eligibility is the main difficulty to be solved in setting up such a program. Alabama physicians are strongly opposed to any provisions which encourage a significant additional segment of our population to become dependent upon a state subsidy if, with some personal sacrifice, this group would be able to pay its own way. In other words, the profession feels that financial eligibility for such a program must still remain relatively strict, or we will extend the welfare state to the detriment of both the people and the profession.

SUPPLEMENTAL REPORT

Since the preparation of the original report of this committee, the Legislative Interim Committee on Indigent Medical Care has held a number of meetings. The chairman of the Association's committee met with them once at their request. The committee of the Legislature is preparing a bill for introduction at the session which opens on May 7.

This report consists of a letter from Mr. R. G. Kendall, Jr., chairman of the Legislative Interim Committee on Indigent Medical Care, and a preliminary statement from that committee. I shall read both to you so that you may have all available information before taking a stand on the principles underlying the proposed legislation.

March 28, 1957

Dr. John Paul Jones, Chairman
Committee on Indigent Medical Care
Medical Association of the State of Alabama
Camden, Alabama

Dear Dr. Jones:

As requested by your group when you appeared before the Legislative Interim Committee on Indigent Medical Care, I am transmitting herewith

a preliminary report on the committee's proposed recommendations for consideration by the Medical Association of the State of Alabama at its annual convention in April.

In this connection I feel that it is essential that I point out several factors concerning this preliminary report and the position of the committee on any program to provide medical care for the indigent and medically indigent of Alabama.

1. The attached report is preliminary in nature only, and while it represents the thinking of the group at this time, it is not necessarily the same thinking that will be embodied in the final report that will be submitted to the Legislature. It is not likely, however, that the committee will change its attitude on the broad fundamentals involved.

2. The report covers only basic principles and does not attempt to set out the many details that will have to be filled in for the final report and in any proposed legislation recommended by the committee. Of course, the details and mechanics should be in keeping with the basic principles.

3. While the principles set forth in the attached report are the thinking of the committee at this time, it cannot be assumed that these principles will be accepted in their entirety and without change by the Legislature as a whole when it considers the problem. You are well aware of the fact that such a proposal will be subject to many outside influences, all of which cannot be anticipated at this time.

With these factors in mind, the committee would like to earnestly solicit your favorable consideration of these principles and subsequent legislation to put them into effect.

Now, on behalf of the committee, I would like to express to you my appreciation for your cooperation with the committee and for your interest in this major health problem that exists in this state. If at any time within the future of the committee you would like to present additional information, we will count it a privilege to hear from you.

Yours truly,
R. G. Kendall, Jr.
Chairman
Legislative Interim Committee
on Indigent Medical Care.

rgk/eas

Preliminary Report
Legislative Interim Committee on
Indigent Medical Care

The Alabama Legislature, by Joint Resolution in a 1956 Special Session, created a committee to make a study of the indigent medical care problem in this state and directed it to make a report of its findings and recommendations by the fifth legislative day of the 1957 regular session.

This committee, in keeping with the above resolution, has been studying the problem and herein proposes to set forth some of its preliminary conclusions for the consideration of the

Medical Association of the State of Alabama.

For the purpose of this report, the following definitions are made:

1. *Indigent.* A person who is unable to provide himself with the basic necessities of life, whether on welfare or not.

2. *Medically Indigent.* A person who might normally pay his bills but because of catastrophic illness he cannot do so.

3. *General Hospital.* A hospital for the care of the acutely ill or injured—as licensed by the state of Alabama.

On the basis of evidence presented, this committee recognizes the need for an indigent medical care program for those persons in this state who are indigent and/or medically indigent.

It is our opinion that the problem can be broken down into two areas:

1. Citizens of the state who are indigent and/or medically indigent.

2. Citizens of the state who are on the welfare rolls because of indigency and whose presence on the welfare rolls constitutes *prima facie* evidence of indigency.

It has been shown the committee that the total cost of indigent and medically indigent hospitalization in Alabama in 1955 was, in 87% of the general hospital beds of the state, more than \$7,000,000, and that the unpaid portion of this was more than \$3,000,000—a sum that was absorbed through higher costs to paying patients and through poorer facilities and services at hospitals. There is no way to determine the amount contributed by members of the medical profession.

This committee is faced with two fundamental problems:

1. The consideration of legislation to ultimately remedy the existing situation;

2. Funds to put into effect a program to provide for medical care for those unable to provide it for themselves.

As for the first fundamental problem, it is the opinion of this committee that the 1957 Legislature should enact a comprehensive law or laws to provide medical care for those persons unable to pay for it themselves.

Further, under the second problem it is our thought that the initial phase of the program should be limited to hospitalization and should not cover such things as physicians' fees, drugs, etc.

It is recognized that at present there is a limited amount of funds available to support all functions of the state and that additional revenue may not be available. For that reason a restricted program most likely perforce will have to be initiated.

Because of the limited revenues of the state general fund and because of the tremendous cost (estimated at between \$5,000,000 and \$7,000,000 annually) of financing the medical care program available July 1 under amended Social Security laws and through the Pensions and Security Department, it is recommended that this program *not* be undertaken at this time.

In light of the above it is felt that certain recommendations should be made by this committee as to what the comprehensive law should provide. These recommendations are as follows:

1. The program for medical care of the indigent and/or medically indigent should be administered through the State Health Department.

2. It should be a program for the acutely ill or injured, and chronic patients would not be covered.

3. The program should be carried out in the existing general hospitals of the state without regard to ownership, but any such hospital should be licensed by the state of Alabama.

4. Before such medical care would be available, a physician would have to attest to its need, but the final decision on hospitalization should rest with the medical staff of the hospital.

5. On the basis of the committee's study of our neighboring states' programs and the statements before this committee by a representative group of the Medical Association of Alabama it is the opinion of this committee that the attending physician should receive no fee for his services from the state, and in such cases the physician should be granted some assurance of immunity from suit. Preliminary study of the matter of immunity leaves doubt as to whether this would be possible under law.

6. It should be provided that where a patient receives medical care under this program, hospitals and physicians and other interested parties should not be prohibited from collecting from the patient or a responsible relative or other third party.

7. State fund appropriated for this program should be available to the counties on two bases:

A. Certain funds should be made available on a non-matching basis, with each county to receive as its share of the total available a sum in proportion to the ratio of the county's population to the population of the state. (Or, each county should receive an equal share of certain funds.)

B. Certain funds should be available to the counties on a matching basis, with the matching funds available in proportion to the relative economic situation of the county. No county should have a matching basis of less than dollar for dollar.

8. The fact of indigency or medical indigency should be determined by an authority, composed of laymen, created in each county.

9. In the event a local hospital is unable to provide treatment for an eligible person, he should be referred to a hospital that could give such treatment. It is contemplated that University Hospital-Hillman Clinic, Birmingham, should be the ultimate referral hospital; and should an eligible be referred to a hospital in another county, his county of origin should be responsible for payment of his care, and such payment should be on the basis of costs in the hospital where care is rendered.

10. It is the feeling of the committee that should federal funds become available for this program that they should be utilized so long as

such funds are available on a basis consistent with the laws of the state of Alabama.

Your committee feels that you now have before you the available facts on this problem. Does this Association wish to endorse such legislative action?

J. Paul Jones, *Chairman*
Robert C. Berson
D. G. Gill
J. P. Chapman
Henry M. Gewin

Legislation

This committee has had two meetings. The committee met for the first time in Montgomery on August 12. The first problem for consideration at this meeting was to arrive at a recommendation to be made to the Board of Censors on the perennial problem of cultist legislation. A recommendation has been made.

Dr. Frank L. Chenault brought to the attention of the committee the legal situation of children conceived through artificial insemination. He was appointed as a committee of one to gather information on this subject for reporting to the full committee at its next meeting.

The Committee had its second meeting in Montgomery on January 6, 1957. At this meeting there was a great deal of discussion relative to the best ways and means of implementing any legislative program proposed by the Association. The Executive Secretary stated that he believed in the past we may have been weak in two respects: (1) Neither the members of the profession nor the legislators have been properly informed on the issues at stake, and (2) Some of the county contact men were not as active in the program as they should have been. Mr. Dozier proposed that during the month of February he visit the various County Medical Societies and talk with members of each in an effort to be certain that active contact men be named.

It was further proposed that during the month of March each of the Vice-Presidents call a meeting of the Counsellors, Delegates and the County Medical Society Contact Men and Presidents in his division. This meeting would serve to indoctrinate members of the profession and to lay the latest plans before the group. Dr. Chenault pointed out that the various County Medical Societies should invite their legislative representatives to a dinner meeting in an effort to show the representatives some honor and to build their good will. The program was approved.

Dr. Chenault moved that a letter be sent to the members of the Judiciary Committee of the Legislature who supported the Association's stand in the last session of the Legislature, this letter to express appreciation of this committee as a formally constituted part of the Association. This motion was adopted.

The chairman of this committee suggests that the Vice-Presidents, the Counsellors, the Delegates, the Contact Men and the President of each County Medical Society be furnished a copy of any proposed legislation which the Association supports.

It was pointed out that the physical therapists had requested approval and support of the Association for a physical therapists' bill. The committee disapproved the bill at this time.

It was the opinion of the committee that a revision in the coroner system was greatly needed and well past due. This committee decided to request the Committee on the Coroner System to advise as to the progress made and the status of its present work.

Dr. Gill informed the group that the State Health Department was requesting a sizable increase in funds and that he would be calling upon the profession and this committee for support in this matter. This committee feels that an increase in funds for the Health Department is highly desirable. The committee is willing and ready to support Dr. Gill in his request, and recommends that the members of the Medical Association of the State of Alabama give their support to Dr. Gill in this matter.

Dr. Frank Chenault, acting as a one-man committee, reported on the condition of children born by artificial insemination. This report was a masterpiece and classic. One would have to be well educated with a fine cultural background and above the average intelligence to have given such a humorous, interesting and instructive report. The committee referred this report to the State Board of Censors with the recommendation that a brief be prepared and presented to the Attorney-General with the request that his office prepare proper legislation. It is the opinion of this committee's chairman that this report should have wide circulation among the members of the medical and legal professions.

The committee then turned to the matter of national legislation. It was pointed out that the American Medical Association is suggesting that each State Association set up a legislative committee; that a legislative contact man be appointed in each County Medical Society; that a legislative manual be prepared by each state and that each Association prepare a panel of nominations for key legislative men to be presented to the American Medical Association.

G. O. Segrest, *Chairman*
J. A. Martin
F. L. Chenault
E. V. Caldwell
J. Michaelson
M. V. Adams
J. H. Little
Lucian Newman
W. S. Owsley
Ex Officio
D. G. Gill
Douglas L. Cannon
Mr. W. A. Dozier, Jr.

REPORTS OF OFFICERS

Report of the Secretary-Treasurer

Douglas L. Cannon

MEMBERSHIP

On December 31, 1956 the membership of the Association was 2,033 a gain of 67 over December 31, 1955. Except for deaths numbering 55

and undetermined migrations, the increase would have been much greater, obviously.

DEATHS

Death claimed five Life Counsellors, Drs. W. A. Gresham, Seale Harris, J. P. Hayes, J. D. Perdue and Walter F. Scott; and three Active Counsellors, Drs. C. T. Acker, W. J. Barber and E. T. Brown. Dr. Harris was a past president of the Association. Dr. Perdue was a member of the State Board of Censors, and Dr. Scott was one of two to serve two terms as president of the Association. The complete obituary record is as follows:

Acker, C. T.	Montevallo
Barber, W. J.	Butler
Bell, W. H.	Dozier
Booth, B. W.	Shorter
Brown, E. T.	Cleveland
Busby, E. D.	Goodsprings
Chapman, L. W.	Grove Hill
Clack, J. T.	Roanoke
Clanton, A. W.	Millport
Comer, R. T.	Birmingham
Crelly, H. C.	Birmingham
Crowder, J. W.	West Blocton
Denson, F. H.	Bessemer
Denton, Marvin	Oneonta
Floyd, T. J.	Abbeville
Franklin, H. G.	Thorsby
Godbold, P. E.	Pine Hill
Gresham, W. A.	Russellville
Harris, Seale	Birmingham
Hayes, J. P.	Clanton
Holton, J. B.	Jasper
Hughes, J. W.	Decatur
Johnston, J. D.	Brundidge
Kincannon, L. T.	Birmingham
Klie, H. B.	Forkland
Lazansky, J. P.	Birmingham
Lindsey, A. R.	Mobile
Lindsey, E. A.	Opelika
Lucius, R. S.	Eutaw
Manasco, Titus	Carbon Hill
Martin, T. M.	Plantersville
Mastin, O. C.	Wedowee
McKinley, C. F.	Atmore
Meneray, W. E.	Gadsden
Morris, H. R.	Birmingham
Owings, T. L.	Dixiana
Penton, J. R., Sr.	Montgomery
Perdue, J. D.	Mobile
Peyton, W. H.	Athens
Prather, R. C.	Phenix City
Robinson, C. B.	Marion
Scott, E. M.	Birmingham
Scott, W. F.	Birmingham
Shepherd, R. H.	Jasper
Shepherd, S. T.	Birmingham
Silvey, G. E.	Gadsden
Smith, G. H., Sr.	Ensley
Stallworth, J. P.	Canoe
Stephens, B. A.	Lineville
Stuteville, Ethel	Oakland, California
Townsend, A. L.	Dothan
Warren, W. E.	Fort Payne
Wear, T. R.	Tuscaloosa
Wilson, L. E.	Birmingham
Wrenn, W. J.	York

THE FIFTY YEAR CLUB

Certificates of distinction are to be awarded twenty-three physicians of the state who have practiced their profession for fifty years, and the presentations will be made tomorrow morning immediately after the Jerome Cochran Lecture. Those who are to receive the certificates are as follows:

A. Lanthus Blakeney	Fayette
David A. Bush	New Brockton
Edwin V. Caldwell	Huntsville
Turner C. Cameron	Faunsdale
Reuben A. Foshee	Alexander City
Jesse A. Gibbs	Gainesville
Howard A. Griffith	Sheffield
Walter F. Hamilton	Birmingham
John M. Hanks	Birmingham
William S. Hansard	Ider
James S. Harmon	Elmore
Elbert F. Leatherwood	Hayneville
Belford S. Lester	Birmingham
George W. Newburn	Prichard
Edward O'Connell	Birmingham
John M. Roberts	Vernon
Wilbur M. Salter	Anniston
Eliga G. Sandlin	Holly Pond
Harvey B. Searcy	Tuscaloosa
James A. Sims	Renfro
John W. Snow	Graysville
Keller B. Williams	Hartford

Dr. James P. Stallworth of Canoe was to have received his certificate at this meeting but death intervened. It will be mailed to his family.

PRESIDENTIAL APPOINTMENTS

Drs. E. Bryce Robinson, Jr., and B. W. McNease were appointed delegate and alternate, respectively, in the House of Delegates of the American Medical Association, their terms to expire December 31, 1958.

Other appointments were made as follows to the committees of the Association: Medical Service and Public Relations—Drs. J. E. Moss, E. Byron Glenn and Paul Nickerson for full terms, Dr. N. E. Cowart to succeed Dr. J. H. Lary, who is absent from the country; Dr. J. O. Colley, Jr., to succeed Dr. S. W. Windham, who is entitled to a seat on the committee by virtue of his vice-presidency; and Dr. J. S. DuBois to succeed Dr. W. J. Barber, deceased. Committee on Mental Hygiene—Dr. Frank Kay; Maternal and Child Health—Dr. N. R. Clarke, Jr.; Cancer Control—Dr. W. N. Jones; Prevention of Blindness and Deafness—Dr. Truett Jackson; Postgraduate Study—Dr. A. F. Wilkerson; Physician-Druggist Relationships—Dr. A. D. Henderson; Anesthesiology—Dr. Alfred Habeeb; Tuberculosis—Dr. W. J. Tally; Industrial Medicine—Dr. W. G. Thuss; Liaison, UMWA Medical Care Program—Dr. E. A. Isbell; Insurance—Dr. B. M. Carraway; Coroner System—Dr. E. B. Wert; and AMEF—Dr. Dowling Petrey.

STATUS OF COUNSELLORS-ELECT

Last year, four members were elected Counsellors; namely, Drs. John L. Carmichael, Daniel R. Ramey, Jr., Robert W. Stallworth and Sidney J. Williams. They have qualified, as required by the Constitution of the Association, and are to be

added to the Roll of Active Counsellors when the revision of the rolls is made on Saturday morning.

OFFICERS TO BE ELECTED

Officers to be elected at this session are a President-Elect, a Vice-President for the South-western Division to succeed Dr. W. R. Carter, whose term has expired; one Censor for two years to fill the unexpired term of Dr. J. D. Perdue, deceased; and two Censors for five years to succeed Drs. C. E. Abbott and Robert Parker, whose terms expire this year.

Twenty Counsellors are to be elected also: From the 1st Congressional District, 4. W. J. Barber is deceased. J. Mac Bell has resigned. The second term of seven years of J. Paul Jones has expired. W. A. Stallworth is to be elevated to Life Counsellor. 2nd District, 3. The second terms of seven years of J. O. Lisenby and F. W. Riggs have expired. Dr. L. V. Stabler is to be elevated to Life Counsellor. 3rd District, 1. Frank H. Boyd has resigned. 4th District, 1. C. W. C. Moore is to be elevated to Life Counsellor. 5th District, 1. J. M. Crawford's first term of seven years has expired. 6th District, 3. Chas. T. Acker is deceased. R. C. Partlow's second term of seven years has expired. A. F. Wilkerson's first term of seven years has expired. 7th District, 1. E. T. Brown is deceased. 8th District, 3. J. O. Belue and C. A. Grote are to be elevated to Life Counsellors. H. A. Darby has resigned. 9th District, 3. The second terms of seven years of George A. Denison and Hughes Kennedy, Jr., have expired. R. E. Cloud has resigned.

APPOINTMENTS TO BE MADE

It will be the responsibility of the next President to name a delegate and an alternate to the American Medical Association for terms of two years to succeed Drs. J. Paul Jones and D. G. Gill, whose appointments will expire December 31, 1957.

No reference is being made at this time to vacancies on the committees of the Association, inasmuch as a revision of the list of committees is being proposed at this annual session.

ASSOCIATION FINANCE

A year ago you authorized me to reinvest \$2,000 from U. S. Savings Bonds that would mature on June 1, 1956. Instead, it became necessary to deposit the amount to the credit of the general fund of the Association, as well as slightly more than \$3,000 in a savings account belonging to the Committee on Medical Service and Public Relations, the general fund having been nearly depleted through the Association's expanded services.

Three \$500 bonds will mature May 1, 1957, and authority is sought to invest the proceeds from them in purchasing other U. S. Savings Bonds.

All the bonds of the Association are in the Association's deposit box at the First National Bank, Montgomery.

The accounts of the Association for the year 1956 have been audited by Crane, Jackson and Wilson, Certified Public Accountants of Montgomery, and the audit constitutes the concluding pages of this report.

February 8, 1957

To the Officers and Members,
The Medical Association of The State of Alabama,
Montgomery, Alabama.

Gentlemen:

We have examined the cash accounts of the Treasurer of The Medical Association of the State of Alabama for the calendar year 1956, and have prepared the following statements therefrom:

Exhibit "A": Summary Statement of Cash Receipts and Disbursements for the year ended December 31, 1956.

Exhibit "B": Statement of Cash Disbursements for the year ended December 31, 1956.

Exhibit "C": Securities Owned at December 31, 1956.

Our examination included the tracing of all recorded cash receipts to the bank statements, and the vouching of all returned cancelled bank checks to the record of disbursements. Cancelled bank checks also examined as to amount, signature and endorsement. Records of receipts and disbursements were proved for mathematical accuracy.

Securities owned by the Association, detailed in Exhibit "C", were verified by physical examination on February 4, 1957, at the safety deposit vault of the First National Bank of Montgomery.

Respectfully submitted,
Crane, Jackson and Wilson.
W. H. Crane C. P. A.

The audit begins on the next page.

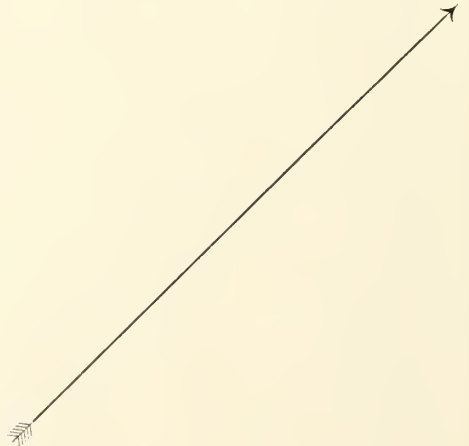


EXHIBIT "A"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1956

Cash Balance—January 1, 1956:

Checking Account—First National Bank.....	\$12,157.15	
Savings Account (Association)—First National Bank	2,553.79	
Savings Account (MS & PRC)—First National Bank—Note "A".....	3,047.75	\$17,758.69

Cash Receipts:

Association:

County Dues	\$26,402.50	
Counsellors	2,440.00	
Sale of Association Rosters	147.50	
Interest on Savings Account.....	25.59	
Past President Pins.....	25.00	
Refund for Annual Session Expense	20.75	\$29,061.34

Journal:

Advertising	\$16,075.84	
Cooperative Medical Dividend	547.79	
Non-Member Subscriptions and Sales	170.06	16,793.69
American Medical Association Dues	\$15,087.50	
Less: Remittances to American Medical Association	15,087.50	-0-

Medical Service and Public Relations Committee:

Refunds	\$ 1,106.95	
Interest on Savings Account—Note "A".....	30.54	1,137.49 \$46,992.52

Cash Disbursements (Exhibit "B"):

Association	\$ 6,911.43	
Medical Service and Public Relations Committee.....	33,091.19	
Journal	19,302.94	59,305.56
Excess of Disbursements Over Receipts		\$12,313.04

Cash Balance—December 31, 1956:

Checking Account—First National Bank	\$ 2,866.27	
Savings Account (Association)—First National Bank.....	2,579.38	\$ 5,445.65

Note "A": Transferred to Checking Account—First
National Bank December 28, 1956.

EXHIBIT "B"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
STATEMENT OF CASH DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1956

Association:

Salary—Douglas L. Cannon.....	\$ 600.00	
Printing and Mailing 1956 Transactions.....	2,122.62	
Annual Meeting Expenses:		
Guest Speakers.....	\$ 384.70	
Printing and Mailing Programs.....	298.47	
Badges.....	168.38	
Public Address System.....	150.00	
Travel Expense.....	75.89	
Projection Equipment and Engineer.....	75.00	
Lettering Certificates of Distinction.....	11.50	1,163.94
Expenses of Delegates to Meeting of American Medical Association.....	862.71	
United States Savings Bonds Purchase.....	600.00	
Other Printing and Stationery Costs.....	450.70	
Medical Care Act Meeting.....	311.71	
Postgraduate Committee Expenses.....	300.00	
Past Presidents Lapel Buttons.....	160.80	
Postage.....	108.00	
Accounting Services.....	90.00	
Fidelity Bond—Treasurer.....	50.00	
Membership Dues—Conference of Presidents.....	50.00	
Office Supplies and Expense.....	31.70	
Safety Deposit Box Rental.....	5.50	
Bank Exchange.....	3.75	\$ 6,911.43

Medical Service and Public Relations Committee:

Salaries:

W. A. Dozier, Jr.....	\$ 8,833.33	
Emmett Wyatt, Jr.....	3,600.00	
William T. Crenshaw.....	1,668.56	
Mrs. Marianne M. Baisden.....	1,050.00	
Mrs. Dorothy M. Flowers.....	1,050.00	
Mrs. Ethel C. Thomas.....	800.00	\$17,001.89

Furniture, Fixtures and Equipment:

Robotyper, Perforator and Service.....	\$ 1,635.76	
Desks and Chairs.....	917.36	
Typewriter.....	672.64	
Photographic Equipment and Supplies.....	382.50	
Cabinets.....	226.62	3,834.88

Total Carried Forward.....\$20,836.77

Total Brought Forward.....\$20,836.77

Travel Expense—W. A. Dozier, Jr.....	3,300.00	
Express and Postage.....	3,032.89	
Printing and Stationery Costs.....	1,951.20	
Office Rental.....	1,640.00	
Telephone and Telegraph.....	863.21	
Office Supplies and Expense.....	621.90	
Exhibit Expenses—Alabama State Fair.....	248.68	
Payroll Taxes.....	247.36	
Special Session—Whitley Hotel.....	118.00	
Travel Expenses—Others.....	112.43	
Alabama Pharmaceutical Association.....	100.00	
Savings Bond for Essay Contest.....	18.75	\$33,091.19

Journal:

Salaries:

Douglas L. Cannon, M. D.....	\$ 600.00	
Lurette Kilpatrick.....	1,020.00	\$ 1,620.00
Printing and Mailing Journals.....	17,679.51	
Postal Manual.....	2.00	
Telegram.....	1.43	19,302.94
Total Disbursements.....		\$59,305.56

EXHIBIT "C"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SECURITIES OWNED
DECEMBER 31, 1956

Quantity	Description	Date of Issue	Purchase Price	Redemption		Date of Maturity	Maturity Value
				Value 12-31-56	Increase		
4 (A)	\$500.00 Series "F" U. S. Savings Bonds No. D274010F to No. D274013F	6-1-44	\$ 1,480.00	\$ 2,000.00	\$ 520.00	6-1-56	\$ 2,000.00
3	\$500.00 Series "F" U. S. Savings Bonds No. D385709F to No. D385711F	5-1-45	1,110.00	1,470.00	360.00	5-1-57	1,500.00
11	\$500.00 Series "F" U. S. Savings Bonds No. D386331F; No. D386367F to No. D386369F; No. D386371F; No. D386373F to No. D386376F; No. D386378F; No. D386379F	11-1-46	4,070.00	5,109.50	1,039.50	11-1-58	5,500.00
3	\$500.00 Series "F" U. S. Savings Bonds No. D677782F to No. D677784F	5-1-49	1,110.00	1,291.50	181.50	5-1-61	1,500.00
2	\$1,000.00 Series "F" U. S. Savings Bonds No. M1510584F to No. M1510585F	5-1-49	1,480.00	1,722.00	242.00	5-1-61	2,000.00
1	\$10,000.00 Series "F" U. S. Savings Bonds No. X355045F	5-1-49	7,400.00	8,610.00	1,210.00	5-1-61	10,000.00
14 (B)	\$1,000.00 Series "J" U. S. Savings Bonds No. M32178J to M32191J	2-1-54	10,080.00	10,500.00	420.00	2-1-66	14,000.00
1	\$5,000.00 Series "J" U. S. Savings Bonds No. V20131J	7-1-55	3,600.00	3,675.00	75.00	7-1-67	5,000.00
5	\$1,000.00 Series "J" U. S. Savings Bonds No. M209103J to No. M209107J	1-1-56	3,600.00	3,645.00	45.00	1-1-68	5,000.00
			\$33,930.00	\$38,023.00	\$ 4,093.00	\$46,500.00	

(A) Bonds were in the process of being redeemed at December 31, 1956. Money was received January 11, 1957.

(B) Purchased for The Medical Service and Public Relations Committee.

Report of the Executive Secretary
W. A. Dozier, Jr.

After the annual meeting last April, the Board of Censors, in accordance with the recommendation which had been adopted, created the office of executive secretary. On June 1, the duties of that office were assumed.

ACTIVITIES OF 1956

Rolls of the Association

One of the immediate activities undertaken was the keeping of the rolls of the Association. Inherent in this was the matter of records regarding dues, both Alabama and American Medical. As each segment of the work was shifted to the central office, procedures in use were

studied to ascertain whether or not there were means of speeding, simplifying, or saving money. In some instances it was possible. For example, the address plates used by the printer for addressing the *Journal* formerly were prepared by an outside concern. The central office now prepares these. In so doing there is a saving in time and effort as well as some two cents per plate. Over a period of time, this small saving can amount to a sizable sum.

Roster

In speaking of the preparation of the Roster, which is printed, mention should be made of the new information included for the first time in 1956. Date of birth for each man is now listed, and it is felt that the Roster is as complete as it

can be without being burdensome both monetarily and time wise.

Journal

Beginning in June, the central office took over the business phases of the *Journal*. Preparation of the advertising section of each *Journal* had to be learned as well as studied for methods of making the operation more efficient. The mailing date for the *Journal* has been moved from the fifteenth to the tenth of each month. This change was made to please advertisers more, and by so doing it was anticipated that more advertising would be placed in the *Journal*.

While speaking of advertising, it should be pointed out that the amount is on the increase. This year has seen more pages of advertising matter than ever before. It goes without saying that advertising pays for the publishing of a journal. In the past, however, the Association has had to underwrite a portion of the cost. It is firmly hoped that the *Journal* will pay for itself in the 1957 fiscal year.

Late in 1956 it was possible to turn attention to changes in the *Journal*. First thoughts were toward new features and changes in the format. The January 1957 issue carried two new sections, the "President's Page," and an "Organization Section." Also, new headings were prepared and used for the first time. In changing format, one must be very careful; so haste is being made slowly. Later in this report you will find mention of other proposed changes and refinements. Suffice it to say here that the Board of Censors and the committees of the Association now have a place to report to the membership, which has been needed for some time.

Medicare

A goodly portion of 1956 has been spent on Medicare. The executive secretary attended meetings in Chicago and Atlanta gathering information on this subject. The Board then appointed a committee composed of Drs. Robert Parker, Chairman, John L. Branch, and J. Paul Jones to handle all matters pertaining to this program. Since most members of necessity have had to acquaint themselves with this program, it is not necessary to dwell at length on the matter. In summary, however, these steps were necessary. There was a call meeting of the Association on October 7. On that date the Association accepted the plan proposed by the Defense Department, approved fees for some 270 procedures, and named the Association to serve as its own fiscal administrator.

Subsequently, Drs. E. V. Caldwell, John L. Branch, D. G. Gill, Robert Parker and G. O. Segrest, and the executive secretary went to Washington to negotiate with the Department of the Army. It was learned that the Army was requiring negotiation on some 1,650 procedures; so nothing final could be done. A proposed schedule covering the full list of procedures was prepared and sent to each County Medical Society with the information that any disapproval would have to be in the central office by a specified date.

At the next meeting of the Board, the schedule

was approved; but it was decided that the Association would be unwise to serve as fiscal administrator. This necessitated another meeting of the Association which was held on December 16. Subsequently, the Board designated the Liberty Mutual Insurance Company as fiscal administrator; and on March 11 of this year, Liberty Mutual assumed this responsibility.

Routine Services

The central office has continued working with all committees and continues to handle the details of such programs of the Committee on Medical Service and Public Relations as the placement service, exhibits at fairs (Birmingham, Montgomery, and Mobile), *P. R. Notes*, *Your Health*, and the like. New programs such as the speakers bureau and the TV spots will be coordinated from the central office. Services to specialty groups, such as setting up meetings, publicity, and the like, have continued to be offered.

Annual Session

The next big undertaking has been the dissemination of information relative to the annual session. Lack of information for the individual voting member has been a complaint. This year, the committee and officer's reports have been called for ahead of time. These have been reproduced and put into the hands of each Counselor, Delegate, and Alternate Delegate, as well as being sent to each County Medical Society. With the materials in hand, the voting members can be prepared to vote intelligently; and those Societies which so desire can instruct their Delegates on key issues. It is believed that this plan can prove beneficial during the years to come.

Other small refinements should be mentioned relative to the annual session. A change in badges has been effectuated in an attempt to make them more readable. The program has been expanded and the format changed. Registration has received some streamlining, and the physical arrangement of the hall during the final business meeting has been changed. Although many of these details were not evidenced until this meeting, they required thought and planning which extended back to last fall.

Expanded Quarters

The expanded program and the assumption of additional duties in the central office has required larger quarters. Luckily, adjacent office space to that previously rented was available; and a change in address was not necessitated. Additional furniture and equipment had to be purchased, and the office is comfortable under present circumstances. Additional changes which will be mentioned later may well cause it to become overcrowded again.

PLANS FOR 1957

Internal Organization

In attempting to create a smooth and efficient organization, the Board of Censors has approved a division of the work into three bureaus—Administration, Medical Service, and Public Relations. Depending upon approval of the recommendations of the Committee on Revision of the

Constitution, the following programs and/or committees would fall into the purview of the respective bureaus:

Bureau of Administration: Journal, rolls of Association, annual and special sessions, budgets, Medicare, intra-professional relations, Committee on Constitution and By-Laws, Committee on Insurance, Committee on Medical Education and Hospitals, Committee on American Medical Education Foundation.

Bureau of Medical Service: Committee on Maternal and Child Health, Committee on Medical Care for Industrial Workers, Committee on Cancer Control, Committee on Rural Health, Committee on Emergency Medical Service, Committee on Indigent Care, Medical Advisory Board to the Alabama Society for Crippled Children.

Bureau of Public Relations: Committee on Public Relations, which presently supervises or plans programs on physician placement, speakers bureau, medical forums, mass media (TV-radio-press), exhibits at fairs, public safety program, public relations institutes, emergency call system, medical assistants courses, and inter-professional relations; Committee on Legislation; Committee on Veterans Affairs.

Advisory Committee

The Board has also set up an advisory committee to the Executive Secretary composed of Drs. J. O. Finney, J. W. Simpson, and J. M. Weldon. Each of these men will concern himself primarily with the work of one bureau; and with the chairmen of the committees in that bureau, they will compose a council for the bureau's work. The Advisory Committee will also consider matters referred to the Board by committees, County Societies, or individuals. They will do the necessary background work on each matter and present each to the Board with proper recommendations.

Legislature

The State Legislature will convene on May 7. It is necessary here to say only that judging from past experience all members will have to concern themselves with this phase of the work. Plans which must be effectuated before May follow the same lines used in the past.

Journal

Mention was made earlier of the work done on the *Journal*. With the July issue, which is the time for a new volume to begin, it is planned to change the format considerably. The planned changes will be in accord with present day practices in journalism and will aim toward making a more attractive and readable book. It is hoped that during the year some decision may be reached relative to a change in the cover. If so, this cannot occur until the January 1958 issue because of advertising contracts.

Executive Assistant

One recommendation approved last April has not been completed yet, that is to hire an executive assistant. This is something that must be accomplished soon, for the work of the Association is not progressing as rapidly as necessary;

and the present staff cannot continue to serve in stop-gap positions.

Budget

In looking at a proposed budget for the year, there are a few preliminary statements that should be made. The Association has never before had a budget to cover its full activities. Because of this, some of the estimates have, of necessity, been made without proper background experience or figures. The budget is, however, based on what figures and experience were available and upon discussion and serious weighing of each factor by a number of officers and Board members of the Association. It is believed that the budget is the best possible under present circumstances.

One word must be said about budgets in general. In most instances, a budget is not a hard and fast appropriation. It is an attempt to plan for a period of time and determine what the cost will be under a given set of circumstances. It is in effect a guide toward a specified goal; it can be, and it often must be, revised. Even so, it is a necessity for any efficient organization which seeks to attain a given set of goals.

You will note that the following budget is organized according to the three bureaus discussed above. Following the budget itself will be some explanatory notes which should be considered when viewing the overall planning.

Proposed 1957 Budget

Income:			
Dues (1,600 estimated paying members) . . .		\$ 80,000.00	
Journal Advertising (\$19,055.02 in 1956) . . .		19,000.00	
Refund, State Med. Journal Adv. Bureau (\$547.74 in 1956) . . .		500.00	
A. M. A. Dues Collection Service (\$372.75 in 1956) . . .		350.00	
Sale of Association Rosters (\$147.50 in 1956) . . .		140.00	
Rent, Alabama Academy of General Practice . . .		120.00	
Nonmember subscriptions to Journal (\$102.24 in 1956) . . .		100.00	
Total . . .			\$100,210.00
Expenditures:			
Bureau of Administration . . .	\$60,000.00		
Bureau of Medical Service . . .	2,300.00		
Bureau of Public Relations . . .	18,000.00	\$ 80,300.00	
			\$ 19,910.00
Building Fund . . .		15,000.00	
Unencumbered Balance . . .		\$ 4,910.00	

Budgeted Expenses by Bureaus

1. Bureau of Administration			
Salaries			
General			
Executive Secretary . . .	\$10,000.00		
Secretary (full-time) . . .	4,500.00		
Secretary (full-time) . . .	3,900.00		
Clerk (full-time) . . .	3,000.00		
Secretary-Treasurer . . .	600.00		
Secretary (part-time) . . .	1,020.00	\$23,020.00	
Journal			
Editor . . .	600.00		
Secretary (part-time) . . .	2,400.00	3,000.00	\$26,020.00
Travel:			
Excutive Secretary (\$3,208.76 in 1956) . . .		3,500.00	
A. M. A. Delegates (\$862.71 in 1956) . . .		1,000.00	

Committees:			
Advisory Committee (3 mbrs., 2 mtgs.)	105.00		
Constit. & By-Laws (7 mbrs., 2 mtgs.)	245.00		
Insurance (5 mbrs., 2 mtgs.)	175.00		
Med. Education & Hosp. (5 mbrs., 3 mtgs.)	262.50		
A. M. E. F. (5 mbrs., 2 mtgs.)	175.00	962.50	
Office Staff (annual meeting)	150.00	5,612.50	
Printing:			
Journal (\$17,679.51 in 1956)	18,000.00		
Transactions (\$2,122.62 in 1956)	2,200.00		
Programs:			
Annual meeting (\$298.47 in 1956)	350.00		
Division meetings (assume 1 per Div.)	250.00	600.00	
Badges	60.00	\$20,860.00	
Rent (\$100.00 per month)		1,200.00	
Stationery & Supplies (\$2,004.71 total 1956)		1,800.00	
Telephone & Telegraph (\$813.01 in 1956)		600.00	
Postage (\$2,296.00 in 1956)		1,800.00	
Library		75.00	
Photography		50.00	
Annual Session (other expenses):			
Guest speakers	800.00		
Equipment	50.00		
Secretarial service	25.00		
Miscellaneous	50.00	925.00	
Accounting Services		100.00	
Fidelity Bond—Treasurer		50.00	
Equipment Repairs		100.00	
O. A. S. I. Taxes		585.40	
Miscellaneous		222.10	
Total		\$60,000.00	
2. Bureau of Medical Service			
Travel:			
Committees:			
Maternal & Child Health (5 mbrs., 2 mtgs.)	\$ 175.00		
Medical Care for Industrial Workers (7 mbrs., 2 mtgs.)	245.00		
Cancer Control (5 mbrs., 3 mtgs.)	262.50		
Rural Health (5 mbrs., 4 mtgs.)	350.00		
Emergency Medical Service (5 mbrs., 2 mtgs.)	175.00		
Indigent Care (5 mbrs., 4 mtgs.)	350.00	\$ 1,557.50	
Printing (pamphlets)		500.00	
Stationery and Supplies		100.00	
Postage		100.00	
Miscellaneous		42.50	
Total		\$ 2,300.00	
3. Bureau of Public Relations			
Salaries:			
Executive Assistant (9 months)	\$ 4,500.00		
Secretary (9 months)	2,700.00	\$ 7,200.00	
Travel:			
Executive Assistant	1,500.00		
Committees:			
Public Relations (10 mbrs., 4 mtgs.)	700.00		
Legislation (9 mbrs., 6 mtgs.)	945.00		
Veterans Affairs (5 mbrs., 2 mtgs.)	175.00	1,820.00	3,320.00
Office Equipment		1,000.00	
Printing:			
Health Column (\$267.80 in 1956)	275.00		
Pamphlets (\$873.34 in 1955)	900.00	1,175.00	
Rent (\$60.00 per month)		720.00	
Stationery & Supplies		1,000.00	
Telephone & Telegraph		500.00	
Postage		1,000.00	
Library		15.00	
Photography		15.00	
Equipment Repairs		50.00	
O. A. S. I. Taxes		157.00	
Woman's Auxiliary		200.00	
State Fair		500.00	
Essay Contest Prize		18.75	

Legal Fees	500.00
TV Spots	260.00
Miscellaneous	369.25
Total	\$18,000.00

Notes on Budget

Committee Travel (All Bureaus): In the past the Association has asked a man not only to give of his time and effort but also to pay his own way while so doing. It is realized that the Association cannot reimburse a man for his loss of time from his practice, but it does seem only fair that the Association pay his out-of-pocket expenses. In setting a figure for this travel, it has been necessary to make some assumptions. Those used were that the average mileage for each member of a committee would be 200 miles and that one meal would be eaten. The assumed number of meetings for each committee are listed. Mileage was figured at eight cents (\$.08) per mile and the meal was estimated at one dollar fifty cents (\$1.50).

Rent: The Association presently pays rent of one hundred sixty dollars (\$160.00) per month. It seems wise to prorate this between the two bureaus which presently require space for their activities. These two are Administration and Public Relations.

Stationery and Supplies, Telephone and Telegraph, and Postage (All Bureaus): An attempt has been made to estimate these figures based upon past experience. The division by bureau actually cannot be defended as no such record keeping has been used in the past. The system of bookkeeping which was instituted as of January 1, 1957, will allow proper determination of costs in the future. Beginning in 1958, the budget can be prepared with more concrete evidence and less "blue sky" estimation.

Executive Assistant Salary and Salary for his Secretary: These two items are included because this personnel will be necessary adjuncts to the organization. As explained above, the present force cannot keep pace with current activities; and when such necessities as a legislative program are added, the burden becomes impossible.

Building Fund: It is firmly believed that the only way the Association will ever have a home of its own is to plan toward it by setting up a fund. Whatever can be saved from operating costs should be added to the fund until such time as a building can be had and Alabama joins the ranks of its sister Associations as one that owns its own home.

Recommendations

The first recommendation may be a little premature but present circumstances seem to indicate that waiting another year might be unwise. Some members have indicated that the work of the Association is not worth the dues they have to pay, and this has appeared in print at least once. It is realized that a statewide or nationwide organization cannot give the individual attention to all personal problems that may be possible on a local level. At the same time it is

realized that those members who have been actively concerned with the various programs of the Association may be too close to them to allow proper perspective. Also, as 1957 wears on, the Association will have, through its new book-keeping procedure, a means of applying accurate cost figures to the larger segments of its program. Therefore, with these things in mind, it is recommended that the President appoint a special committee to evaluate the various programs of the Association; that this committee not include anyone who has been too intimately associated with the various programs; and that a purely impersonal evaluation be given to each and every function of the Association, including those things which have been done for years as well as the more recently instituted ones; and that this committee report to the Association at its 1958 annual meeting.

Closely related to an evaluation is the matter of this Association's affiliation with programs recommended or instituted by the American Medical Association. In the past few years at least, this Association's participation in many of these programs has hinged on the ability of the Secretary or the then Director of Public Relations to participate or to motivate some member to take part. It is felt that there has been no real coordination of these efforts and certainly no true evaluation of their merits when viewed in the light of circumstances in Alabama. Such evaluation and coordination are badly needed. Perhaps the Advisory Committee to the Executive Secretary would be the logical group to undertake this phase of the work, but a decision on who will effectuate this should rest with the Board of Censors. It is recommended, however, that this Association carefully evaluate its position relative to American Medical Association programs and plan to become an effective part of those which are believed to be of value. Such a procedure should extend to the point of giving Alabama's delegates to the American Medical Association's House of Delegates some notion of what this Association thinks about major problems.

Next, it is requested that the central office be given time to solidify present gains before trying to attempt too many new programs. In other words, time is needed to allow present procedures to be rechecked and then to become more routine and less studied. Most of the services rendered by the central office do not show the multifarious details which are necessary; but without proper checks, these details can easily get out of control.

Finally, one committee that was recommended last year has not been appointed, this being a building committee. There are no funds, and it was felt that the committee would have nothing to do. This reasoning is not shared by your Executive Secretary. The time necessitated to institute any concrete action and the many details which will have to be handled indicate that now is the time to organize this committee and let it begin planning.

Tribute

I cannot end this report without paying tribute to the members of my office staff. The prog-

ress made in the last few months would have been impossible without their wholehearted loyalty and their cheerful willingness to see a project through. I think the Association should know that since last June there have been very few nights and practically no Sundays that some member or members of my staff were not in the office working. I am confident that the Association joins me in expressing heartfelt appreciation.

Report of Vice-President Anderson

Northwestern Division

There have been no official activities within the Northwestern Division since last year. Since the Association's ruling regarding district meetings has been revised, a division meeting was not held in the fall of 1956. Letters were sent out from the Vice-President's office to each of the sixteen component County Medical Societies asking for an expression of opinion as to the advisability of annual or bi-annual meetings. Only four counties replied, but all expressed preference for meeting in alternate years rather than yearly. Accordingly your Vice-President decided to call the next division meeting in the fall of 1957.

Jefferson County continues to support many fine projects and reports a very active year. No other items of special interest or significance have been reported to me.

Report of Vice-President Carter

Southwestern Division

After much deliberation and careful thought, it did not seem feasible to hold a meeting in the division this fall. For the past three years, even with outstanding speakers and excellent entertainment by the host society, the attendance was very small. In addition, many specialty meetings and those of other scientific nature have been held during the year. These meetings require time and effort on the part of the doctors.

It was my privilege to attend two meetings of the State Board of Censors during the year. The amount of work required of this board amazed me. The members of the board are most capable men and deserve much credit for their untiring efforts in behalf of the Association.

I was honored by the President in being appointed chairman of the Committee on the Revision of the Constitution. May I take this opportunity to thank the members of this committee for their faithful attendance at the meetings, and their unbiased decisions recommended on each revision suggested.

My term of office expires at this time. I wish to thank the Association for the honor and privilege of being of service for the past four years.

Report of Vice President Gray

Northeastern Division

The annual meeting of the Northeastern Division of the State Medical Association was held in

Anniston on the afternoon and evening of December 5, 1956. The scientific meeting was held in the Y. M. C. A. in the afternoon and was followed by a social hour and dinner at the Anniston Country Club.

The Vice President is indebted to Dr. T. C. Donald and his committee for the best meeting held in this part of the state in a long time. Men from the Emory University Medical School and our own University Medical Center contributed excellent papers. Other papers of unusual interest were also presented.

All those at the dinner were indebted to Luther Patrick, Birmingham attorney, former U. S. Congressman, and homespun philosopher, for a most entertaining after-dinner talk.

As has been the case for several years, the scientific material was of the highest order and the attendance relatively poor.

Thanks are extended to Mrs. Fred Smith, of Huntsville, Vice President of the Northeastern Division Woman's Auxiliary, and Mrs. P. J. Fagan, president of the local Auxiliary in Anniston, and her committee for their help in the meeting.

The Vice President has met a number of times with the Board of Censors and with other special committees at Montgomery during the year.

I must comment on the addition of the vice presidents to the Board of Censors as ex officio members. I had no idea of the amount of work those men do, the complexity of the problems they consider, and the amount of time and effort required in fulfilling their duties. My hat is off to them!

Report of Vice-President Windham

Southeastern Division

This division has not held a meeting during the past year, and the reason for this is as follows: No group in the division requested the privilege of putting on the meeting; and because of the ruling by the Board of Censors at the 1956 meeting, no effort was put forth to pressure a group into having the meeting for the division. It is my contention that this is a satisfactory situation in that at the present time physicians cannot attend all meetings of the various societies extending invitations.

The medical population of this division continues to grow. There is no area that is now not adequately serviced by practitioners. The growth of the medical population has been accompanied by further increases in medical facilities. With the proposed addition to St. Margaret's Hospital in Montgomery, this entire area is now adequately served as far as hospitals are concerned. We now turn our attention to the newer concepts of medical care, namely, the proper hospitals and/or homes for the aging. There is more than one group in this division ready to make application for such facilities. It is expected that at least one of these will be approved in the next allocation for funds for construction.

For a period of approximately five months, a

study of the mechanics of the Association's meetings was made by me. Recommendations were formulated and referred to the proper committees. After this study, it is my feeling that the time is now upon us when our present machinery should be overhauled. It is my opinion and recommendation that a thorough job be done on this in order that we may modernize our methods. My feeling pertaining to change in methods of meeting is such that the entire suggested change is appended to this report for your information.

We are again approaching a session of the State Legislature. We know already there are important bills to be presented by cults and possibly by individual legislators which will have serious effect on the medical setup in Alabama as we know it at this time. Through personal contact with people in the Legislature, I am told that the medical profession of Alabama can, in most instances, secure the proper type of legislation by letting the members of the House and Senate, respectively, know of their desires. This should be done by personal presence at committee meetings on issues important to us. An example was set before me relating to the pay of the State Health Officer. His salary increase was about to be refused because of the apparent lack of interest by the medical profession in Alabama. I would strongly suggest that during the legislative period physicians throughout Alabama be notified as to the time and place of important meetings pertaining to medical legislation and that the physicians attend these meetings. I have reason to believe that they will be asked for their opinion on a number of these subjects. It is time that we, as a profession, wake up, recognize and assume our responsibility, not only in the practice of medicine but in making our desires known in an effort to prevent legislative acts adverse to the health and welfare of the people of this state.

Mechanics of Meeting of the Alabama State Medical Association

To: Chairman, Medical Service and Public Relations Committee:

The following report is submitted by the Committee on the Mechanics of Meeting of the State Medical Association. This report is made with complete disregard for our present Constitution and By-Laws as the present organization and the method of conducting meetings will not fit at all into the concepts which are to be recommended to you by this committee. The committee for the study and possible revision of the present Constitution and By-Laws, as appointed by your President, has been forewarned about some of the major changes which are to be recommended, and it is anticipated that in their studies next month these changes will be given due consideration.

The recommendations which are to follow presupposes that the officers, State Board of Censors, and any other delegated group in authority requiring reports from either committees or individuals will procure these reports not later than March 1 of the year in which the meeting is to be held and that these reports will also be

distributed to the voting body of the Medical Association, the presidents of the respective County Medical Societies, and to other officers or selected physicians in the state sufficiently far in advance that these reports might be studied prior to the beginning of the annual session. It also anticipates the possibility that the members of the designated reference committees will be appointed by the President far enough in advance that they might be given copies of any reports, resolutions, constitutional amendments, etc. for consideration before their arrival at the site of the State Association's meeting.

Meetings

The meeting of the Association shall be arranged by the President and any other group of the Association designated by him to assist in making these arrangements.

The inaugural meeting shall be held on the third Sunday of the month of April except when Easter coincides with this Sunday and, in those years, the fourth Sunday of April shall be designated as the date for this session. The program for this meeting will be arranged by the President of the Association.

Registration of the House of Delegates with the reference committee on credentials will begin at 1:00 o'clock P. M. General registration will also begin at 1:00 o'clock P. M.

House of Delegates

Duties: The legislative body of the Association is the House of Delegates. It shall transact all business of the Association not otherwise specifically provided for in the Constitution and By-Laws and shall elect the general officers.

Composition and Apportionment: The voting body, herein after called the House of Delegates, will be constituted according to the constitutional amendment entitled *Resolution on Reapportionment* passed by your voting body at its annual session in 1955. This sets out the following: "In accordance with article five, section one of the Constitution of the Medical Association of the State of Alabama as amended, the State Board of Censors makes the following apportionment of delegates: The medical societies of the counties of Autauga, Baldwin, Barbour, Bibb, Blount, Bullock, Butler, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Coffee, Colbert, Conecuh, Coosa, Covington, Crenshaw, and Cullman. Dale, Dallas, DeKalb, Elmore, Escambia, Fayette, Franklin, Geneva, Greene, Hale, Henry, Houston, Jackson, Lamar, Lauderdale, Lawrence, Lee, Limestone, Lowndes, and Macon. Marengo, Marion, Marshall, Monroe, Morgan, Perry, Pickens, Pike, Randolph, Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Walker, Washington, Wilcox, and Winston shall each have two delegates; the medical societies in the counties of Calhoun, Etowah, Madison, and Tuscaloosa shall each have three delegates; the medical society of Montgomery county shall have five delegates; the medical society of Mobile county shall have eight delegates; and the medical society of Jefferson County shall have nineteen delegates."

In addition to the delegates as set out above,

the College of Counsellors will be accorded one vote each and will be constituted as set out in the Constitution of your state Association.

The House of Delegates shall be further composed of past presidents, past members of the State Board of Censors, the Secretary of the Association, the Executive Secretary of the Association, the Editor of the Journal of the Association and two delegates from the Senior Class of the Medical College of the state of Alabama who will be ex-officio members of the House of Delegates without the right to vote.

Qualifications for Membership in the House of Delegates: In order to be eligible for membership in the House of Delegates, a physician must be an active member of his County Medical Society, duly elected by his home Society, and armed with credentials signed by the president and secretary of his home Society or present satisfactory evidence showing his status as an ex-officio member.

Should a delegate not register at the meeting of the Association or should such delegate permanently absent himself therefrom, his place may be supplied by an alternate providing the latter presents to the committee on credentials the same type of credentials as required of the delegate. Once an alternate is seated, he will serve for the duration of the annual meeting.

Term: Delegates and alternate delegates shall be elected for one year and shall serve from the first day of the Association meeting until a similar time one year hence.

Privileges: Delegates shall be entitled to vote and shall be eligible for such offices as provided in the Constitution and By-Laws of this Association.

Registration: The delegates and/or alternates shall register with the reference committee on credentials presenting the properly documented credentials.

A delegate or his alternate may be seated without credentials providing he is properly identified as the delegate or alternate selected by his society and so certified to the Secretary of the Association.

When a delegate and his alternate are unable to attend a specified session, for example, a called session, the appropriate authorities of his society may appoint a substitute delegate and a substitute alternate who, on presenting proper credentials, shall be eligible for the meeting of the House of Delegates in question.

Status After Seating: Delegates whose credentials have been accepted by the reference committee on credentials and whose name has been placed on the roll of the House of Delegates shall remain a delegate until final adjournment of that session. If a delegate once seated is unable to be present on account of sickness or any other emergency, his place may be taken by an alternate if approved by the reference committee on credentials. After the alternate has been seated he cannot be replaced.

First Session House of Delegates

The first session of the House of Delegates will convene on the date designated above at 3:00

o'clock P. M. with the following order of business:

1. Called to order by the President of the Association.

2. Invocation.

3. Report of the reference committee on credentials.

4. Welcoming address by the President of the host Society.

5. Welcoming address by the mayor and/or his representative of the city in which the meeting is being held.

6. The President announces the reference committees.

7. The reports of the standing committees of the Association are referred to the appropriate reference committee.

8. The reports of special committees are similarly referred.

9. The report of the State Board of Censors as a Board of Medical Examiners, as a State Committee on Public Health, and as a Board of Trustees, will be given at this time.

10. Report of the officers of the State Association.

A. The Vice-Presidential reports:

- a. Northwestern Division
- b. Northeastern Division
- c. Southwestern Division
- d. Southeastern Division

B. The President's message.

11. The reading of supplementary reports or unIntroduced resolutions.

12. Adjourn.

At any meeting the House, by a majority vote, might change the order of business.

The Privilege of the Floor: During the presentation of reports of the reference committees, standing committees, special committees, the resolutions, etc., the privilege of the floor of the House of Delegates for a period of five minutes may be extended to any member of the House of Delegates by a majority vote of the constituted body. This is in order that the privileged person might assist in the deliberations of the House of Delegates. This same privilege holds for the second meeting of the House of Delegates. During periods of open discussion, this privilege may be granted by the presiding officer.

Quorum: The quorum for the House of Delegates shall be one hundred.

Types of Meetings: The House of Delegates may meet in open session to which any person may be admitted. By majority vote of the delegates, an open session may be transformed into either a closed or an executive session.

A closed session shall be restricted to members of the Association and to members of the staff of the Association.

An executive session shall be limited to members of the House of Delegates as set out above.

The following standing committees of the State Medical Association are hereby provided:

1. Medical service and public relations.

2. Maternal and child health.

3. Cancer control.

4. Postgraduate study.

5. Mental hygiene.

6. Blindness and deafness.

7. Tuberculosis.

8. Physician-druggist relationships.

9. Anesthesiology.

10. Liaison, United Mine Workers medical care program.

11. Committee on publications.

The special committees are hereby provided:

1. Insurance.

2. Indigent medical care in Alabama.

The following reference committees are hereby provided:

1. Reference committee on credentials.

2. Reference committee on Constitution and By-Laws.

3. Health and education.

4. Public policy.

5. Finance and administration.

6. Legislation.

Reference Committees

The reference committees will be appointed by the President of the Association and the chairman designated by him. These committees shall serve during the session at which they are appointed. Each committee shall consist of five members, three elected delegates from County Medical Societies, and two members from the College of Counsellors.

Resolutions, reports, propositions, or other matters of business presented to the House of Delegates shall be referred to the appropriate reference committee for consideration and report. Reports of all reference committees shall be presented to the House before final action may be taken. These reports are made by the chairman of the individual reference committee with recommendations from his committee. Minority reports may be made by as few as one of the committee but he who wishes to make a minority report must refrain from signing the majority committee report and must make his intentions known to other members of the reference committee while it is in executive session and prior to the presentation of the majority report to the House of Delegates. The procedure of business with reference to these committees has been set out previously. It is recommended, however, that prior to the announced time the members of the specified reference committee should have an executive session at which time they could brief themselves and have preliminary discussions of the matters which have been referred to them for decisions. Then the open meeting should be held, at which time it may be held as an open meeting, closed meeting, or, at designated intervals, executive session. After all of the evidence has been submitted for and against the business at hand the committees should then hold another executive session at which all evidence

is carefully gone over, decisions made, and reports written.

Monday, 9:00 A. M.: Scientific session.

Monday Night: Special entertainment by individuals, organizations, and/or county medical societies playing host to the Association can be arranged at the discretion of the president. This committee would suggest that the President's Banquet and Dance be made a more popular part of the program and suggest that it be held on Monday night.

Second Session House of Delegates

Tuesday, 9:00 o'clock A. M.:

Order of business:

1. Meeting called to order by the President.
2. Report of the chairman of the credentials committee.

3. Report of the reference committee.

4. Election of officers.

5. Adjourn.

Tuesday 2:00 o'clock P. M.: Scientific session.

Tuesday Night: Professional program under the direction of the President of the Association. At the completion of this, the third scientific assembly, the Association will adjourn.

Enclosure I

From a study of the various state organizational associations, most of them have a group of outstanding, eminent, or interested physicians called counsellors but they are included as ex officio members of the House of Delegates without the right to vote. For example, one society sets out the ex officio members from the House of Delegates as the president, president elect, the vice-presidents, the trustees and counsellors, secretary and treasurer, assistant secretary and treasurer, ex-presidents of the state society, and presidents of the component county societies. Only the trustees and counsellors are prohibited by the constitution from serving as elected delegates from the component medical societies in the state from which this quote is obtained. We have no strong feeling pertaining to this matter but recognize that the most frequently expounded reason for the College of Counsellors is the fact that the legal ruling of a continuous counsel makes it possible for the Alabama Medical Association to also be the Alabama State Board of Health. This group as ex officio member of the House of Delegates, even though they did not have a right to vote, could be a continuous group and thereby comply with this legal ruling. With the continuous growth of life counsellors and the apparent fixation of the House of Delegates made up of delegates from the respective counties apportioned as set out above, it is certainly within the realm of possible thought that ultimately the College of Counsellors would completely dominate the medical thinking at any one meeting. This is submitted in the report simply to stimulate discussion and possible recommendation to the State Board of Censors and the legally constituted voting body of the Association. It happens, at the present time, the delegates outnumber

the counsellors by a number of less than twenty. Even at present with the Constitution requiring more than a simple majority of votes to change the Constitution, the College of Counsellors can now dominate the Association as far as constitutional changes are concerned. It is not likely the situation will present itself, but there is always this possibility. Thus, it is brought to your attention for consideration, discussion, and recommendation.

Enclosure II

Mr. President, _____ number of delegates and counsellors are present, their credentials are in order and the Medical Association of the State of Alabama is ready to do business.

Enclosure III

The following suggestions to chairman of the reference committees are in order to be made: Committee meeting shall be held at the time and in the room assigned. If any deviation is to be made a notice will be left in a designated place advising where the chairman may be reached or if the meeting is transferred to another room or adjourned until another time, the notice will give all necessary information and the presiding officer of the meeting notified of the change. The committee shall hear any member of the society who wishes to appear before it whether he is a delegate or not. The committee may hear individuals who are not members of the society. The committee may, at the chairman's discretion, go into executive session for the purpose of hearing any individual or group of individuals.

Officials of the Association could be utilized to the fullest extent for information. This may relate to actions of previous House of Delegates meetings that have considered similar matters or any other pertinent material. Officers and members of the Board of Censors should be requested to appear before your committee when necessary. Since they have many commitments, their appearance, if possible, should be by appointment. If any matters are referred to your committee which, in your opinion, do not properly belong in your committee for consideration, do not make any referrals yourself. Advise the presiding officer who will make decisions as to referrals. This must be done in order that all records are kept in proper order. The reference committee reports should be prepared without the presence of strongly partisan individuals preferably in executive session. These reports should be made in three copies and presented to the Secretary of the Association. It is desirable that all members of your committee sign the originals and first copy of the report but in no event can a report be accepted without a majority signing. The presiding officer will appreciate a written record of the attendance of members of your committee and other evaluating opinions after the session is over. This information will be confidential and for his help and guidance at future sessions.

To the members of the reference committee the following suggestions are offered:

If you are appointed to a reference committee, remember your work is not finished until you have signed the committee report. At least a

majority of the members of the reference committee must sign the report before it can be submitted to the House of Delegates and each member who appears in it must sign the original and one copy. When the report is completed, make a point to look up the chairman of the reference committee so that he will not have to lose time in seeking out members of the committee. If a reference committee is unable to reach a unanimous decision, it is perfectly proper that there also be a minority report. This can be presented by either one or two members of the committee. If there is a minority report, it should be just as carefully prepared and signed as the majority report.

Enclosure IV

It is anticipated that special items of the reports can be broken down and referred to selected reference committees for study and recommendations. This is a rather drastic change from previous procedure in that all matters have been referred to the State Board of Censors for consideration and on the last day of the meeting the Board reported to the Association as a State Board of Censors and the other two capacities which are normal for them. It is anticipated from this change that the State Board of Censors will remain as a State Board of Medical Examiners, a State Committee for Public Health, and that their other duties will be replaced by those of a Board of Trustees for the Association of the state of Alabama. This report as a Board of Trustees should be made at the inaugural meeting in order that this report can be referred to reference committees as are any of the other reports.

Enclosure V

It is the intent of this committee that the officers report will be referred to reference committees as any other reports and that they may or may not be read before the Association. It is, however, the intent that the President's message will be given in detail to the Association.

Enclosure VI

Except in an emergency this will be the final session at which any new business, new reports, or resolutions can be introduced at the meeting of the Association now in session, except by unanimous consent of the House of Delegates.

Any new business of an emergency nature must be placed in the hands of the presiding officer at the beginning of the last session of the House of Delegates. The presiding officer shall then refer the resolution to the appropriate reference committee which will immediately study the proposed emergency business and report back to the House of Delegates its opinion as to whether or not it is a true emergency. If the committee reports that it is of an emergency nature the matter shall then be presented to the House. The House may then act on such business without further reference to the committee. If the committee reports that the business is not of an emergency nature the presiding officer will defer its introduction until the next session of the House of Delegates. Favorable action shall require the affirmative vote of two-thirds of all the House of Delegates present and voting.

Enclosure VII

This entire report is formulated on the concept that all resolutions, reports, and other matters of business will be submitted to the Association in ample time prior to the annual session for the material to be catalogued and sent to each member of the House of Delegates for study prior to the inaugural meeting of the Association. This information can be compiled and sent as handbooks to the members of the House of Delegates prior to the annual session.

Enclosure VIII

Scientific sessions should continue throughout the day Monday as designated by the President of the Association. The Jerome Cochran Lecture, the recognition of the Fifty Year Club, and the announcement of the vacancies in the College of Counsellors can be distributed throughout the professional program period as the President of the Association sees fit to do.

President's Message

I have for many years had an ambition to be President of the Medical Association of the State of Alabama. I consider it the greatest honor that can come to any Alabama doctor. The things I should have done that I haven't done are regretted. The responsibilities of being President of the Association are so many, so varied, so constant and so great that there are not too many among us who could do all things best. I have enjoyed doing the best I could and I have kept the faith. I shall possess from now on to the end of my days a deep sense of obligation and respect for the doctors in Alabama.

It has been a pleasure and an education to have seen at first hand the workings of the State Board of Censors under the capable leadership of Dr. E. V. Caldwell. This board has taken the time to hear all who wanted to be heard. Its deliberations and decisions were those of good and dedicated men. Their knowledge, wisdom, sense of fair play and democracy made me feel good all over again that our form of government gives us a Board of Censors.

Dr. Douglas L. Cannon has been my guiding light. The feel, the knowledge and the satisfaction that he has been my friend; that he wished me well; that he wanted to help; and that he sees all and knows all, have inspired me with a feeling that all would be well in the end.

Dr. D. G. Gill has helped me on many occasions. The help has been well rendered, he has been kind, sympathetic and understanding and I am glad, again, that our form of government gives us a State Health Officer and that that officer is Dr. Gill.

Mr. W. A. Dozier, Jr., has rendered to the Association and to me daily this year an enormous amount of valuable, useful and essential service. One would have to be dedicated to do so much for so little.

Dr. Robert Parker, Dr. John Branch and Dr. Paul Jones, who served as an interim committee of the State Board of Censors, rendered to the Association a most acceptable, worthy and useful service in working out the enormous details

connected with the Medicare Program. As long as we have doctors in Alabama as capable as these and, so long as they donate such unselfish and capable service for the common good of all, we can't go wrong.

Dr. Julius Michaelson as chairman of the Medical Service and Public Relations Committee and Dr. M. Vaun Adams, as vice chairman of the same committee, along with other members of this committee, have rendered to the people of Alabama and to the Association a very worthwhile and useful service. This is one of the most important committees of the Association and its affairs are in excellent hands.

Dr. W. R. Carter, chairman of the Committee for the Revision of the Constitution, and other members of this committee should be especially commended for their untiring efforts and long deliberations in the consideration of a most difficult problem. I hope this Association will always have the wisdom to eliminate undesirable features and out-dated provisions of its Constitution and By-Laws. I do not believe the Constitution and By-Laws of the Association to be sacred in the same sense that the Bible is the inspired work of God, but I am opposed to any change in the Constitution and By-Laws that will not in some way render a greater service to a larger number of people. I am not dedicated to the principle that change, *per se*, is progress. It might be better on occasions to bear the ills we have than to experiment with others we know not of. Democracy is a great word; but service, devotion and dedication also have a place in an organization of this kind. Remember Russia claims to have a democracy superior to our own, but the democracy of Russia to us, and I believe eventually for all the world to see, is a crime committed in the name of democracy.

The other standing and special committees of this Association have done a magnificent job in conducting and forwarding the business of this organization. Without the devoted service of these committees the program of the Association could not be conducted.

I was not surprised, but nevertheless pleased, that all doctors who were asked by me to serve on committees or in any other way render service to the Association have accepted their responsibilities and have rendered excellent service.

During the past year it has been my pleasure on several occasions to come in contact with Mrs. John F. Holley, President of the Woman's Auxiliary. This has made being President easier and a much more pleasant task. The position of trust and responsibility of the doctors in this state is largely due to the fine and noble women they have taken to wife. Their kind and sympathetic understanding, their devotion to duty, their willingness to help, their lofty ideals and their dedication have made the medical profession what it is today. The doctor's wife is his best public relations and without good public relations, in spite of good intentions, we fail. May our good public relations continue to improve until all men everywhere, who are sick in body, soul or mind, can have the service of a physician of their own choosing at a time that the service is needed at a price they can afford.

I would like to mention the services rendered by the Legislative Committee. This committee has met several times with almost a full attendance at each meeting. Very important matters pertaining to the welfare of this Association as well as that of the people of Alabama have been discussed and seriously considered. Dr. Frank L. Chenault especially rendered valuable service on this committee. His report to this committee on artificial insemination, expressed in perfect diction, was most interesting, instructive, profound and humorous. I heartily recommend it as a best-seller to all doctors in Alabama.

The Medical College of Alabama in Birmingham is a young college, but an excellent one. Its excellence will be maintained and improved only if the doctors in Alabama are interested enough to contribute thought, time and money to its advancement. The leadership and teaching ability of such men as Dr. Tinsley Harrison, Dr. Champ Lyons and Dr. Robert Berson are as good as any and superior to many. It is an obligation of the doctors of Alabama to the people of this state to educate and train the best qualified young persons in our Medical School in such a manner that the good health of the people of the state will be assured from one generation to another. Medicine is a profession, an art, a science and a way of life and not a business. Only young people with this philosophy should be encouraged to study medicine. While the Medical School as it now exists is an excellent one, it is going to be increasingly necessary for this Association to give serious thought to medical education if the growing demands of the people of Alabama for adequate medical attention are to be met. At the present time 80 students are admitted yearly to the Freshman Class. It is necessary for Alabama to have approximately 100 new doctors yearly to meet the growing demands for medical attention by the people of this state. The time will come when it will be necessary to have two medical schools in Alabama—a large one in Birmingham and small one in Mobile.

Approximately forty per cent of the graduates of the Medical College of Alabama seek their internships and residencies outside of the state. This is true partially because there are not enough facilities in the state for the teaching of interns and residents. This is a grievous fault in our medical education in the state and one that deserves careful consideration by the doctors and the State Legislature. Eventually enough money will have to be appropriated by the State Legislature to establish several regional centers for the training of interns and residents. These regional centers will be competing with the best medical centers in the United States and for that reason, in order to attract interns and residents, must be excellent training centers. It is inadvisable and wasteful for interns and residents to seek their training outside of the state as many of these do not return to our state after their training.

The doctors of Alabama continue to have an increasing interest in the American Medical Education Foundation. It is our obligation to support this program as the Medical College of Alabama receives yearly a substantial sum from this Foundation.

As I understand it, the money made available by the State Government to the State Board of Health has not been increased for five years. During this time prices of salaries and materials have gone up and up. The population of the state has also materially increased. If it had not been for increased efficiency and otherwise good management of the State Health Department, the services rendered now by this department would be much less than five years ago.

Dr. Gill is planning to ask the next Legislature to supply additional money to the Health Department for the following purposes:

(1) One additional public health nurse in each county.

(2) To assure the efficient operation of two hundred and fifty new beds for tuberculous patients to be opened in this state in the next year or two.

(3) To continue the polio vaccine program in the state when the Federal Government ceases to support this program in the next few months.

It has been estimated that slightly more than one million dollars will be needed to assure the operation of these three projects. Dr. Gill is expecting the doctors of Alabama to wholeheartedly support him in this effort, knowing that the money will or will not be made available for these very needy things depending on the effort and attitude of the doctors. Every doctor in the state is a member of the State Board of Health and should be willing to assist in this worthy cause. If this money is not made available, it will be our fault and not the fault of the Legislature.

Some three to four years ago a national magazine conducted a poll to determine who rendered the greatest service to the American people. In this poll were listed preachers, doctors, lawyers, judges, teachers, engineers, industrialists, labor unions and many others. When the votes were in and counted, the preachers came out first and the doctors second. This gives credence to the statement that medical science is one of the strongest forces acting in modern civilization toward human betterment. Five hundred years ago the average length of human life was eight years. This great contribution to civilization by medical science has been made possible by the philosophy of "Service Above Self" by the individual doctor and his freedom to use this philosophy according to the dictates of his own conscience.

This brings us to a very important subject, "Socialized Medicine." Socialization is socialization and is equally detrimental to the good health, happiness and continued prosperity of the American people whether administered by governmental panel as in England or by service contract in Alabama. It has been said that if we do not allow ourselves to be socialized by an insurance company that we will be socialized by the Federal Government. To me there is an invisible line separating the two. Why then spend an enormous amount of thought, time, energy and money fighting one, on the one hand, and surrendering to the other, on the other hand? Doctors know nothing about the insurance busi-

ness and should not be expected to operate an insurance company successfully even if appointed by the State Medical Association.

The College of Counsellors continues to be the subject of considerable criticism. To me the Counsellors have been the greatest stabilizing influence in this Association down through the ages. The Counsellors that I have known, with few exceptions, have been willing at any time to render any reasonable service to organized medicine. If more than the average substance of evils exist in the College of Counsellors, which I doubt, the evils should be corrected as far as possible in order that a great and noble institution might be preserved in its entirety for the good it will do in the future for organized medicine. I do not believe the day will ever come when the State Medical Association will not badly need the wisdom, the guiding influence and the services of the College of Counsellors.

For the first time this Association is going to conduct an indoctrination course for young physicians at its annual meeting. The curricula of medical colleges have been so scientifically full that very little time is left to teach the finer things in life. The indoctrination course is designed to emphasize good citizenship and the spiritual side of the practice of medicine. It is impossible to be a good doctor without being a philosopher and a good citizen. The chairmen of philanthropic enterprises have said many times that doctors are the poorest contributors of any group in similar financial circumstances. Politicians have said that most doctors take very little, if any, interest in politics and that far too many doctors do not ever take the time to vote on election days. These are grievous faults—faults that the indoctrination course will bring to the attention of the young doctors in Alabama.

I wish to say again that I shall always remember the pleasure, satisfaction and privilege of being President of the Medical Association of the State of Alabama.

Scientific Program

Dr. Howard W. Jones, Jr., Assistant Professor of Gynecology, Johns Hopkins University, Baltimore, presented a paper on Functional Uterine Bleeding.

The Differential Diagnosis of Tumors of the Neck was discussed by Dr. Lewis C. Sharman, Tuscaloosa.

Dr. Rhett P. Walker, Mobile, read a paper on the Causes of Coronary Disease.

Infantile Cortical Hyperostosis was the subject dealt with by Dr. John Caffey, Professor of Clinical Pediatrics, College of Physicians and Surgeons, Columbia University, New York City.

Miscellaneous Business

The Secretary of the Association read resolutions that had been submitted by the

Jefferson and Montgomery County Medical Societies. They, and other resolutions, will be found in the proceedings of the last day.

Afternoon Session

Thursday, April 18th

2:00 P. M.

Dr. Tinsley R. Harrison, Professor of Medicine, Medical College of Alabama, Birmingham, discussed Palpation of the Pericardium.

The Best Treatment of Toxemia of Pregnancy was outlined by Dr. Robert N. Creasick, Associate Professor of Obstetrics and Gynecology, Duke University, Durham, N. C.

Dr. John E. Moss, Mobile, presented a paper on Certain Problems in the Management of Pulmonary Disease.

The Psychiatrist, the General Practitioner and the Community was the subject of Dr. Kenneth E. Appel's presentation. Dr. Appel is Professor of Psychiatry at the University of Pennsylvania, Philadelphia.

Dr. Jay M. Arena, Associate Professor of Pediatrics, Duke University, discussed Accidental Poisoning in Children.

Social Events

Members of the Association and their guests were entertained by the Medical Society of Mobile County at a buffet supper and dance at the Country Club. In deference to Holy Week, no other social affair was engaged in.

Second Day

Friday Morning, April 19th

9:00 A. M.

Drs. Champ Lyons and J. Garber Galbraith, Professors of Surgery, Medical College of Alabama, jointly presented a paper on Surgical Relief of Little Strokes Due to Thrombosis of the Internal Carotid Artery.

Mr. J. Finley McRae, President, Merchants National Bank, Mobile, addressed the Association on the subject of The Doctor as a Community Citizen—One Banker's View.

The Jerome Cochran Lecture was delivered by Dr. Irvine H. Page, Director of Research, Cleveland Clinic Foundation and President of the American Heart Association, his subject being The Treatment of Arterial Hypertension.

Mrs. John F. Holley, President of the Woman's Auxiliary, was presented to the Association, and she introduced Mrs. Robert Flanders, President, Woman's Auxiliary to the American Medical Association.

Fraternal delegates from other organizations were presented by President Segrest. Groups represented were the Alabama Dental Association, the Pharmaceutical Association, the Alabama Bar Association, and the Farm Bureau. The president-elect of the Florida Medical Association, Dr. Wm. C. Roberts, was also introduced.

President Segrest awarded Certificates of Distinction to the following physicians of Alabama who had been practicing their profession for fifty years:

A. Lanthus Blakeney	Elbert F. Leatherwood
David A. Bush	Belford S. Lester
Edwin V. Caldwell	George W. Newburn
Turner C. Cameron	Edward O'Connell
Reuben A. Foshee	John M. Roberts
Jesse A. Gibbs	Wilbur M. Salter
Howard A. Griffith	Eliga G. Sandlin
Walter F. Hamilton	Harvey B. Searcy
John M. Hankins	James A. Sims
William S. Hansard	John W. Snow
James S. Harmon	Keller B. Williams

A posthumous award was made the family of Dr. James P. Stallworth, recently deceased, who was to have received his certificate at this meeting.

Miscellaneous Business

The secretary of the Association announced vacancies as follows in the College of Counsellors:

1st Congressional District—4. W. J. Barber is deceased. The second term of seven years of J. Paul Jones has expired. W. A. Stallworth is to be elevated to Life Counsellor. J. Mac Bell has resigned.

2nd Congressional District—3. The second terms of seven years of J. O. Lisenby and Frank Riggs expire. L. V. Stabler is to be elevated to Life Counsellor.

3rd Congressional District—1. Frank Boyd has resigned.

4th Congressional District—1. C. W. C. Moore is to be elevated to Life Counsellor.

5th Congressional District—1. J. M. Crawford's first term of seven years has expired.

6th Congressional District—3. Charles T. Acker is deceased. R. C. Partlow's second term of seven years has expired. A. F. Wilkerson's first term of seven years has expired.

7th Congressional District—1. E. T. Brown is deceased.

8th Congressional District—3. J. O. Belue and C. A. Grote are to be elevated to Life Counsellors. H. A. Darby has resigned.

9th Congressional District—3. The second terms of seven years of Geo. A. Denison and Hughes Kennedy, Jr., have expired. R. E. Cloud has resigned.

Afternoon Session**Friday, April 19th****2:00 P. M.**

Medicine's Socio-Economic Policies were outlined by Dr. David B. Allman, President-Elect, American Medical Association, Atlantic City, N. J.

Dr. Donald W. Seldin, Professor of Medicine, Southwestern Medical School, Dallas, Texas, discussed Toxic and Therapeutic Potentialities of Adrenal Steroids.

The Medical College of Alabama—A Progress Report was the subject of the Dean of the College, Dr. Robert C. Berson.

Dr. William Parson, Professor of Medicine, University of Virginia, Charlottesville, dealt with Recent Advances in the Concept of Obesity.

Dr. Earl B. Wert, Mobile, read a paper on The Clinical Laboratory—An Assay.

The last paper of the meeting was on The Surgical Treatment of Bronchiectasis and was delivered by Dr. Sim Penton, Montgomery.

Last Day, Saturday, April 20th

The Association, sitting as the Board of Health of the State of Alabama, was called to order at 9:00 A. M. by the President, Dr. Grady O. Segrest.

The report of the Board of Censors was rendered by the Chairman, Dr. E. V. Caldwell, Huntsville.

**EIGHTY-THIRD ANNUAL REPORT OF THE
STATE BOARD OF CENSORS, INCLUDING
ITS REPORT AS A STATE BOARD OF MEDICAL EXAMINERS AND AS A STATE COMMITTEE OF PUBLIC HEALTH**

E. V. Caldwell, M. D., Chairman

PART I

The State Board of Censors has the honor to submit to the Association its Eighty-Third Annual Report.

THE PRESIDENT'S MESSAGE

The President, after thanking the Association for honoring him with the presidency, speaks of the many phases of responsibility that came with the honor. He states that it has been a pleasure and an education to have served in this capacity. He speaks in complimentary terms and expresses his thanks to all those who have worked with him to make this year a success.

He pays tribute to the Woman's Auxiliary of the Association for its fine work and cooperation; and he states, and I quote: "The position of trust and responsibility of the doctors in this state is largely due to the noble women they have taken to wife."

He praises all the committees of the Association for their magnificent work.

He urges the continued support of the doctors in the Association of our Medical College.

He urges that the Association support the increased appropriations being requested by our Health Department, which are so necessary to the progress of public health in Alabama. He reiterates that every doctor in the Association and under our laws is a member of the State Board of Health, and if this could be fully realized our influence on public health matters would be powerful.

He warns the Association against socialized medicine in any form.

He speaks of the fundamental structure of our Association and believes it is sound, and pleads for its preservation.

He favors the indoctrination course for young physicians at our annual meetings, and closes his message with a plea to the Association as a whole, and personally, to take more interest in politics that they may have a greater influence on legislation affecting public health and the happiness of the people of the state.

The Association endorsed the President's Message.

REPORTS OF VICE-PRESIDENTS

Only one division meeting was held during the year, that being the Northeastern Division meeting in Anniston. An excellent program was presented and the entertainment was of high order, but the attendance was relatively poor.

The Vice-Presidents have appreciated their invitations to the meetings of the Board of Censors, and have commented on the volume of work considered by the Board. On the other hand, the Board has welcomed the contributions that the group has been able to make to Association affairs.

The Vice-President of the Southeastern Division made an exhaustive study of the mechanics of the Association meetings and his recommendations were made to the proper committees of the Association. The Board thanks Dr. Windham for the work he has done and recommends that his report continue to receive the attention of the Committee on Revision of the Constitution.

Adoption of the reports of the Vice-Presidents is recommended.

The reports were adopted.

REPORT OF SECRETARY-TREASURER

The membership reached a new high as of January 1st, 1957, and indicates that the Association is an active vital body. The loss of fifty-five members through death was a blow to the organization since they included men who had been workers throughout the years. One mem-

ber, Dr. Walter F. Scott, had served as President of the Association on two occasions, and Dr. Seale Harris once, while Dr. J. D. Perdue was a member of the Board of Censors at the time of his death. Their colleagues regret their passing on.

Twenty-three members have the distinction of practicing their profession for fifty years, and are to be congratulated on joining this distinguished group.

The Association operated at a deficit of some twelve thousand dollars for the calendar year. When the increase in dues was authorized at the last annual meeting, the Board recommended that the increased activities be inaugurated at once with the reserves of the Association utilized to pay for the program until the accelerated dues became available. It is not anticipated, therefore, that such deficit spending will continue.

Adoption of the report is recommended.

The report was adopted.

REPORT OF THE EXECUTIVE SECRETARY

This is the first report of the Executive Secretary, as authorized by the Association a year ago. He has reported on the many duties and programs set up and functioning during the year. It is felt that a real beginning has been made and that opportunity should be given to evaluate the gains before adopting extensive new programs. Much time and energy were devoted to the inauguration of the Medicare program. It has not been functioning long enough to get all the irregularities out of it, but it is felt that the program can be made to function satisfactorily.

The proposed budget for the new year can only be a tentative one, but should serve as a guide for future expenditures. The estimated receipts are apparently realistic and this year will determine how best this money can be spent to further the cause of organized medicine in Alabama.

The recommendation concerning a review committee is deferred until the next annual meeting.

The numerous programs of the American Medical Association demand an intelligent evaluation from the point of view of this state and there should be a group conversant with the American Medical Association's programs and policies to guide the thinking of this Association. The Board therefore recommends that the President appoint a special committee to serve in this capacity, and to, in turn, recommend to the delegates to the American Medical Association the thinking of this Association.

It is felt the establishment of a building committee can await the outcome of the 1957 budget.

The Board has requested Dr. J. O. Finney to discuss the section of the Executive Secretary's report dealing with budgets.

Dr. J. O. Finney: Three years ago it became apparent that public relations, medical service and other functions of the Medical Association of the State of Alabama would have to be increased both qualitatively and quantitatively to attain a higher order of prestige and influence among other professional groups and citizens outside the

category of the profession. Two years ago the Board of Censors rejected a recommendation considered necessary by the members of the Committee on Medical Service and Public Relations to accomplish the goals desired.

One year ago the Board of Censors approved the carefully considered measures conceived in the interest of progress contained in recommendations of the Committee on Medical Service and Public Relations.

The measures deemed necessary for qualitative and quantitative improvement in the operations of the Association were presented to the duly elected representatives at the annual session in 1956, with the recommendation that the entire proposal be referred to constituent county medical societies for ratification or rejection. These official representatives apparently considered delay entailed by referral to the constituent societies unnecessary and unwise. On a motion, the recommendation for review and action on the proposal by county affiliates was revoked.

The overriding of a carefully considered recommendation of the committee which introduced the proposal clearly left no alternative to prompt initiation of steps required to implement the adopted measures. Certain members of a few of the affiliate counties have expressed dissatisfaction with the action taken in 1956 by their respective official representatives. A procedure is now in operation which should curtail precipitous and uninstructed decision by individual voting members. Beginning this year, each Counsellor and official Delegate received information on all known matters which were to be considered at this annual session. It is assumed that these representatives discussed the various issues at a regular meeting of their respective county societies and are cognizant of the will of the majority of the constituents.

As far as is known, the actual number of members dissatisfied with the proposal adopted is small. The specific proposal most frequently opposed by the majority of those comprising the groups which has expressed disapproval of action taken in 1956 is that of an increase in Association dues. The increase in dues was necessary to operate an expanded program. Please, at this time, allow a statement of assurance to be made, similar to one made at the last annual session of the Association, that the increase in dues, to the degree estimated necessary for support of the approved program, was recommended to you only after long, laborious and conscientious study by all of the members then serving on the Committee on Medical Service and Public Relations. A reminder that the constituents of that committee also pay dues at the prevailing rate should be unnecessary.

Criticism has been expressed over the proposed budget of the Association. Those among you who will conscientiously direct your attention to the vastness of the approved Association projects will readily understand the impossibility of budgetary accuracy at this stage of implementation. Budgetary requests for most projects will become more clearly defined with each year of operation. However, in certain areas, especially

the political arenas at local and state level, funds will be required regularly to better our professional position, stem efforts to assign us to an undignified position in a welfare state, and increase our influence in the interest of the public health. Development of events will dictate expenditures required to support our efforts to maintain a position of independence and influence. The American Medical Association maintains a full-time lobby in Washington. Is the day far off when individual state associations will find it necessary to maintain, on a full-time basis at the state level, overt evidence of interest in legislative procedures and minute-man readiness to extend unconcealed pressure against measures designed to reflect adversely on our profession.

Some have asked whether the current dues are worth while. They have neither heard of nor seen at first hand action to justify the dues. Here again only brief objective consideration should be required to resolve this question. The projects approved by the Association last year require total funds for implementation and fruition and estimated to be that sum accruing from membership dues at a pro rata rate of fifty dollars. Action by the Association in 1956 necessitated initiation of steps basic to the development of a huge and revolutionary program. Funds on hand were insufficient to carry out the general order issued by the Association, making it necessary to borrow \$12,000 to proceed with the preliminary work requisite for operation of a program of which we will be proud. Membership dues for the current year only recently have been received.

Questions have been raised as to whether expenditures for the various programs adopted will be justified even when funds for activation are available. This question cannot be answered today. The justification for support of any project, no matter how worth while its aims and purposes may appear on paper, can only be determined after an operative period sufficient for an adequate collection of data for critical review to accumulate. Those members responsible for executing the Association's 1956 directive for action share with you the desire to determine, solely on the basis of demonstrated merit, justification for continuing support of each of the various projects. To assure unbiased evaluation, a recommendation is to be made at this session earnestly requesting the appointment of a committee to execute a careful analysis, the results of which will permit grading of the effectiveness of each project and the program as a whole. The recommendation specifies that the constituents of this committee be Association members not intimately involved in any of the several projects or the overall program. This provision tends to assure a completely objective approach. A report other than one rendered after a totally objective investigation by unbiased men would be worthless to those charged with execution of the projects or the Association members. It is hoped that such a committee will be appointed soon. It is readily apparent that few projects will have been in operation long enough for data sufficient to permit valid analysis of results earlier than next year. In some instances, an even longer period will be required. A pro-

vision of the recommendation for creation of this reviewing committee is that the report on its findings and recommendations be submitted to the Association at each annual meeting.

Surely the respective intellectual processes of each member of this Association sanctions approval of the ideals and objectives inherent in the expanded program approved by the Association in 1956. There is no place for subjugation of the intellect by emotional pyrotechnics. The problems to be combatted by execution of the program are real, not fancied. Certain strategy we employ may prove ineffective. If so, the experience gained will dictate a more effective approach.

Of it has been said that change does not necessarily assure progress. However, progress rarely occurs without change, and never without intelligent vision and hard work.

The Advisory Committee hopes that the members of this Association will not condone interruption of any part of the program approved at the 1956 session unless analysis of objective data, accumulated after an adequate trial period, indicates the wisdom of abandoning the program.

Dr. Caldwell: The Board recommends adoption of the report.

The report was adopted.

COMMITTEE REPORTS

The Board has been deeply impressed this year with the thoroughness with which committees have discharged their duties. The volume of the reports and the many worth while recommendations indicate the seriousness with which the members have approached their tasks. Consideration of individual reports and recommendations for the action of the Association follow:

PUBLICATION

The Journal reached a new high in circulation during 1956 and continued to be a medium for interchange of information. The cost to the Association in excess of receipts is well justified.

Adoption of the report is recommended.

The report was adopted.

MEDICAL SERVICE AND PUBLIC RELATIONS

As authorized by this Association at its 1956 meeting, this committee has been the medium through which the enlarged and expanded program of the Association has been inaugurated. It has been a year of much activity, but still a year in which only the groundwork for future plans has been laid. This meeting has seen the introduction of a new method of handling committee reports, and it has seen the first indoctrination course for new members, both new but both of which should be continued. If the report of the Committee on Revision of the Constitution is adopted, this committee will be divided, with its component parts of Public Relations and of Medical Services—and other duties will be assigned to still other groups, so that these two committees can concentrate on their prime objectives.

The number of members who have devoted

their time and energies to Association affairs has been a source of real satisfaction and the Association has benefited from their contributions. The Board concurs in the thought that travel expense should be paid committee members if finances permit. This being the first year of the new dues an accurate budget of receipts and expenditures is not possible, but the committee would like permission to reimburse travel expenses if possible.

The recommendation that reference committees be established is deferred at present since the method of introducing reports has been so changed at the present meeting that further time should be given to determine its effectiveness.

Adoption of the report is recommended.

The report was adopted.

MENTAL HYGIENE

Definite progress has continued in the field of mental health. The material improvement that will result at the state institutions through the use of the \$4,000,000 bond issue approved by the voters is commendable.

Progress in the field of training at the Medical College has continued and the University is now accredited for complete psychiatric training. The shortage of personnel in this field is still acute but Alabama should now be in position to train some of its own men.

The expansion of the mental health movement throughout the state has been phenomenal and bespeaks the interest of the lay public in this whole problem.

Adoption of the report is recommended.

The report was adopted.

MATERNAL AND CHILD HEALTH

The continued improvement in the maternal mortality picture is encouraging and the activities of your committee have played no small part in this improvement. The discussion of maternal deaths by specialists in the field of obstetrics with the physicians who were in attendance at those deaths is an excellent method of arriving at the fundamental cause of mortality and as to what can be done to further decrease the price paid by mothers in this state. No censure is intended but only by analysis of what has happened can progress be made.

The suggestion of a seminar or panel discussion on problems of the newborn, manned by obstetricians and pediatricians, and held during the annual meeting of the Association, is worthy of consideration. The Board feels that such a meeting is so important, and that the time at the annual meeting is so limited, there should be a special meeting on this subject and suggests that the Maternal and Child Health Committee, working in conjunction with the Bureau of Maternal and Child Health of the State Health Department, plan and organize such a meeting.

The adoption of the report is recommended.

The report was adopted.

CANCER CONTROL

The committee, in its report, has reviewed the

status of cancer activities in the state and has made certain recommendations to the Association.

The Board concurs in the expressions of appreciation to the many persons engaged in cancer control activities, but in particular wishes to pay tribute to the physicians manning the cancer clinics and to the valuable contributions they are making.

The need for additional state funds for the cancer clinics is obvious. (The Health Department has requested an addition of \$100,000 for this purpose.) Cases now rejected due to financial shortages should be given the benefit of examination and indicated treatment. This can only come if state funds are increased and the recommendations of this committee should be endorsed and supported by the members of this Association.

The question of a central tumor registry is largely a matter of adequate financing. The co-operation of pathologists, surgeons, clinics, the Cancer Society, and the Health Department is assured and the Board hopes that some means may be found to implement this section of the recommendations. The principle involved is approved.

The Board recommends adoption of the report.

The report was adopted.

POSTGRADUATE STUDY

Activities in this field during the past year were largely carried out by the Medical College, and the Academy of General Practice. The Board commends the committee for its continued interest and recommends adoption of the report.

The report was adopted.

PHYSICIAN-DRUGGIST RELATIONSHIPS

This committee has had as its function one phase of the public relations activities, and over the years has made recommendations for improving the relationship between physicians and druggists. Some of these recommendations are repeated this year and they are recommendations that the Association can adopt and support. The Board concurs in the feeling of the committee that it should transfer its activities to the public relations group. This matter is taken care of in the report of the Committee on Revision of the Constitution.

Adoption of the report is recommended.

The report was adopted.

ANESTHESIOLOGY

Continued progress has been made in the number of trained anesthesiologists in the state but there is still need for additional training for men doing part-time work in this field, and such training may be received from the Medical College, from the Lloyd Noland Hospital, and from some of the private practitioners of this specialty.

The Board recommends adoption of the report.

The report was adopted.

TUBERCULOSIS

Alabama continued to experience a decreasing toll of deaths from tuberculosis during the past year, but the committee calls attention to the needs of a continuing program, particularly important at the present time.

The advantages of the newer drugs are apparent but the committee rightly calls attention to the danger from indiscriminate use of these drugs. Tubercle bacilli that have become totally resistant to drug therapy may well result from uncontrolled use of drugs and lead to loss of much of the advance of recent years.

The hospital picture is better today than at any time in history and new beds are in process of construction. When such beds are available the committee's recommendation on compulsory care of recalcitrant patients may well be entertained. The Board concurs in the necessity of training for all medical personnel in the care of tuberculosis.

Adoption of the report is recommended.

The report was adopted.

INDUSTRIAL MEDICINE

The addition of a course in industrial medicine at the Medical College is a forward step and fills a need within the state. The committee discusses the action of the Jefferson County Medical Society in its review of the Industrial Health Council. The report and the action taken by the Jefferson County group would well set a pattern for activities in this field elsewhere in the state.

Adoption of the report is recommended.

The report was adopted.

MEDICAL CARE FOR INDUSTRIAL WORKERS

At the 1956 meeting of the Association the principles to be followed in any agreement between the Medical Association and an industrial group, such as the United Mine Workers, were adopted and it was hoped that a state-wide plan, such as had been approved in Pennsylvania, might be negotiated. The committee finds that the Pennsylvania agreement has been canceled by the Medical Association, and that the administrators of the United Mine Workers Fund are not willing to enter into any other agreements at the state level. The committee, therefore, recommends that county liaison committees be continued to attempt to work out satisfactory arrangements in each county. It further recommends that proper resolutions be submitted to the House of Delegates of the American Medical Association looking toward the formation of fundamental principles for the guidance of constituent associations in their relationship with groups, such as the United Mine Workers of America.

The Board recommends adoption of the report.

The report was adopted.

REPORTS OF COMMITTEES
(Special)

INSURANCE

The committee reports that, as authorized by the Association at the 1956 meeting, two types of

insurance have been made available to members, namely, health and accident and professional liability. Master policies were furnished the Association and individuals could take the type insurance desired. A sizable number of members have taken advantage of the policies offered.

The Board recommends adoption of the report.

The report was adopted.

CORONER SYSTEM

The Committee on the Coroner System calls attention to the efforts over a period of years to effect a change in the present laws. It renews its recommendation that action be taken. The Board is referring this matter to the Legislative Committee with a request that it follow up with the preparation of a new law, and that, if possible, action be taken during the 1957 meeting of the Legislature.

Adoption of the report is recommended.

The report was adopted.

AMERICAN MEDICAL EDUCATION FOUNDATION

During the year 1956 there was contributed to the American Medical Education Foundation a total of \$7,182.70, a commendable increase over the previous year. In addition to donations from Woman's Auxiliaries, county medical societies and the Southern Medical Association, 142 individual physicians contributed. These physicians are to be commended and it is hoped that increasing numbers will find it possible to donate to this worthy cause.

Adoption of the report is recommended.

The report was adopted.

REVISION OF THE CONSTITUTION

The constitutional changes proposed by this committee must stand over for a year, so do not need discussion at this meeting. Several amendments to the ordinances are proposed, and the Board endorses these amendments with the exception that it would propose certain alterations as follows:

1. Amend Section 1 of ordinance entitled Sessions of the Association, and Order of Business Therein, as amended in 1949, to read as follows:

Section 1. The sessions of the Association shall comprise three days, Thursday, Friday, and Saturday, the third Thursday in April being the first day of the meeting; provided, however, that it shall be the privilege of the President and Secretary of the Association, with the approval of the Board of Censors, to designate the first, second or fourth Thursday as the first day of the meeting, and that the date of the next annual meeting shall be announced at each annual meeting.

Section 3. It is recommended that there be a new ordinance entitled Time for Submitting Matters Requiring Consideration of the Association. the ordinance to read as follows: All reports of officers, all proposed resolutions and constitutional changes, and any other business requiring the consideration of the voting body of the Association in any given year shall be submitted to

the Secretary of the Association by February 1 of that year to permit their distribution among officers, counsellors, delegates and county medical societies at least thirty days prior to the date of the annual session.

Section 5. Repeal ordinance entitled Committees of the Association and adopt one under the same title reading as follows: The following committees are hereby created, their establishment to be in accordance with the ordinance of the Association providing for the organization of standing committees unless otherwise specified. Committee appointments shall be for five years with the original appointments being on a staggered basis.

(1) Public Relations, composed of fifteen members, and with the President, President-Elect, Secretary of the Association, and the State Health Officer as ex-officio members.

(2) Medical Education and Hospitals, composed of five members.

(3) Medical Care for Industrial Workers, composed of five members.

(4) Insurance, composed of five members.

(5) Constitution and By-Laws, composed of five members, with the Chairman of the State Board of Censors and the Secretary of the Association as ex-officio members.

(6) Indigent Care, composed of five members.

(7) Legislation, composed of ten members, with the President, the President-Elect, the Secretary, and the Executive Secretary of the Association and the State Health Officer as ex-officio members.

(8) Rural Health, to be composed of five members.

(9) Emergency Medical Service, to be composed of five members.

(10) Veterans Affairs, to be composed of five members.

(11) Maternal and Child Health, to be composed of five members.

(12) Cancer Control, to be composed of five members.

(13) Mental Health, to be composed of five members.

(14) Tuberculosis and Chronic Pulmonary Diseases, to be composed of five members.

Section 6. It is recommended that there be a new ordinance entitled Special Committees of the Association to read as follows: There are hereby created special committees of the Association as follows:

(1) American Medical Foundation, to be composed of five members.

(2) Medical Advisory Board for the Alabama Society for Crippled Children and Adults, to be composed of nine members.

(3) Blue Cross-Blue Shield, to be composed of six members.

The Board commends the committee for the extensive study which it made, and for the broad vision shown in its report.

Dr. C. A. Lightcap asked to be heard and spoke as follows:

A constitution should not be considered as an end in itself, but rather as a means to an end. An organization can have a beautifully written and well integrated constitution, yet fail miserably because of poor administration by its officers and members of responsibility. Contrariwise, an organization can achieve a remarkable degree of effectiveness with a poor constitution if it has good administration. However, optimum efficiency can only be attained if an organization has both.

Throughout its history our Association has entrusted its administration to wise, capable and inspired leaders who have discharged their duties to the credit and satisfaction of all. Its plan of organization was carefully engineered and its rules were wisely formulated by an incomparable master, Jerome Cochran.

Time changes all things; even an organization must change to meet the current needs and thinking of its members. Our Association has done so many times in the past, and it will change again when the recommendations made here today are adopted. Still further changes will be made with the passage of time.

In my opinion we should consider making three major amendments in our Constitution which are not mentioned in the report under consideration: 1. Relief for the State Board of Censors by assigning most if not all of its duties in this sphere to an Executive Committee. 2. Giving each county society one active counsellor position which it shall have the power to fill by election and to recall if desired. 3. A provision taking the right to vote away from life counsellors.

Many of the reports submitted at this meeting make mention of the unreasonable amount of work we are demanding from our ten censors. We don't want to force these unselfish men to the embarrassing point of having to ask for relief. Several members of the Association have suggested creating three separate boards, i. e., a State Board of Censors, a State Committee of Public Health, and a State Board of Medical Examiners. However, such an action is impossible because of state statute. It could only be accomplished by legislative action in Montgomery, and to seek this solution would probably be unwise. A more practicable solution, it seems to me, would be to transfer some of the Board's duties to a newly created committee of responsible members and leave the organization of the censors unchanged.

Our present Constitution clearly provides that 100 active counsellor positions shall be apportioned among the congressional districts of the state on the basis of the physician population in each district. In addition, an ordinance sets forth the way by which the Board of Censors shall remove from a district a vacancy which occurs when it has more active counsellors than it is entitled to have, and, further, how the vacancy shall be assigned to a district which has less counsellors than it is entitled to have. These provisions have not been given effect for a number of years, so long until now there exists two wide extremes of representation. Based on figures from the 1956 transactions the seventh dis-

trict has five more counsellors than it is entitled to have and the ninth district has 12 less than it is entitled to.

To keep such provisions in the Constitution is to flaunt disrespect for constituted authority. Yet, I sincerely doubt the wisdom of enforcing them. Therefore, I suggest we face the problem and solve it in a way that would be acceptable to large and small county societies alike.

The position of life counsellor was created just before the turn of the century to enable a faithful servant of the Association to remain active in its affairs when he was no longer financially able to pay dues. No one at the time ever imagined the number of life counsellors would one day, as it does today, constitute over one-third of the College of Counsellors. The increase in their number has already caused two major increases in the total number of delegates and, if the life span continues to grow longer, a further adjustment will have to be made.

Relieved of the responsibility of keeping in touch with organized medicine through attending meetings of the Association, and relieved of all accountability for his actions by not having to face reelection, the life counsellor stands as a paradox in our representative form of government. I have no desire to minimize the gratitude we owe these gentlemen for their service, nor do I suggest taking away from them the title of distinction and honor they have so meritoriously earned, yet I join Dr. Sanders who first suggested that they should lose the right to vote.

I offer the following resolution for consideration:

Resolved; That the constitution of the State Association be amended to provide:

a.) An executive committee be created to consist of members elected by the Association; the number, terms of office, and duties of which shall be determined after recommendation by The State Board of Censors.

b.) That each county society be allocated one active counsellor position which it shall have the power to fill by election and to recall if desired. And further, that every active counsellor presently serving be permitted to complete his term.

c.) That Life Counsellors shall not have the right to vote.

The President of the Association, having ruled that the resolution called for a Constitutional Amendment and would have to lie over for a year, called for the vote on the Board's action on the report of the Committee on Revision of the Constitution.

The Association adopted the report as amended.

INDIGENT MEDICAL CARE

Your committee has worked very closely with the Interim Legislative Committee and has tried to represent the thinking of the profession of this state. Traditionally, medical men have taken care of the indigent sick and will continue to do so. Proposed legislation would provide for payment of some of the hospital expenses for those

unable to finance their illnesses, but makes no provision for the payment of physicians' fees. Hospitals, hard pressed to make ends meet, would get some relief from their indigent load, and this might well be reflected in reduced costs to paying patients. Local determination of eligibles, after medical determination of medical need, would seem to be a wise safeguard.

The Alabama Hospital Association is endorsing this program and the Board recommends that the Medical Association add its support to the proposed legislation.

I would like to have Dr. Jones, who is chairman of this committee, discuss this subject further.

In his discussion, Dr. Jones referred both to the original and supplementary reports of his committee, constituting a part of the proceedings of the first day, to which the reader is referred.

Dr. Garber Galbraith moved that there be a restatement of principles contained in Item 1 of the Criteria for an Alabama Indigent Care Hospitalization Program, and the motion prevailed. The restatement is as follows:

While dentists, pharmacists, nurses, doctors of medicine and other persons providing professional services relating to medical care may be willing voluntarily to give of their time and professional skills to the indigent without recompense, the fact should be recognized that they no more should be expected to resume responsibility for the indigent than are other groups in our society. As long as circumstances make it necessary, however, the members of the State Association will continue to provide such services gratuitously on a voluntary basis. This is a burden which rightfully and through statute and precedent is recognized as an obligation which belongs to us all.

Dr. O. Emfinger moved that the statement on page 3 of said report to the effect that "citizens of the state who are on the welfare roll because of indigency and whose presence on the welfare roll constitutes prima facie evidence of indigency" be deleted from the report.

Dr. J. P. Mudd moved that Dr. Emfinger's motion be amended to read "citizens of the state who are on welfare rolls because of indigency and whose presence on the welfare rolls might constitute evidence of indigency."

On voice vote the amendment was defeated and Dr. Emfinger's motion adopted.

The report of the Board, as amended, was then adopted.

LEGISLATION

The committee has been quite active during the year, primarily in attempting to arrive at a sound legislative program, and as to ways and means of implementing such a program. Certain definite recommendations were made, such as support and backing of health department programs which include increased appropriations. Some revision of the present coroner laws and study of artificial insemination were other projects.

Machinery has been set up to disseminate information to local societies and to keep contact men informed. The Board has deeply appreciated the mature judgment of the committee on cultist legislation, and urges the active support of all members.

Adoption of the report is recommended.

The report was adopted.

REPORT FROM REPRESENTATIVES ON BLUE CROSS-BLUE SHIELD

A comprehensive report on the activities of the Blue Cross-Blue Shield has been presented by the committee. This group of six physicians represents the Association on the Executive Committee of Blue Cross-Blue Shield, and problems relating to the medical end of this endeavor are handled exclusively by it. The people of Alabama have wholeheartedly accepted the company as evidenced by the more than 600,000 persons covered under this program.

The Association was responsible for the creation of Blue Cross-Blue Shield and should support it in every way possible.

The Board recommends that the representatives of Blue Cross-Blue Shield be set up as a special committee of the Association and that they report annually to the Association.

The Board appreciates the work of this group and commends its report to the Association.

The Association concurred in the expression of the Board.

LEGISLATION

This is a legislative year and very shortly the legislators will convene to consider many matters of importance to the people of Alabama. Matters affecting the health of the people will, as usual, claim major consideration. As an Association we are interested in promoting sound legislation that will improve and protect the public health, and we are opposed to any proposals that will adversely affect that public health.

The Board cannot at this time predict all the proposals that will be made but it bespeaks your active backing of the program of the State Health Department. At the same time it urges all members to stand ready at the call of our President to use every influence possible to support certain legislation and to oppose certain other bills. The most effective approach is the direct contact with members of the Legislature by physicians as individuals and as representatives of their county societies. Such personal appeals carry

enormous weight. The Association, in all programs, including the Health Department activities, will need your wholehearted support.

The Board recommends adoption of this section of the Board's report.

The report was adopted.

PROPOSED CONSTITUTIONAL AMENDMENT

Resolved, That Article VI, Section 6, of the Constitution of the Medical Association of the State of Alabama be amended to read as follows:

In consideration of having served the Association for twenty years, Life Counsellors shall be released from the obligation of compulsory attendance upon meetings of the Association imposed upon other Counsellors.

The Board recommends adoption of this constitutional amendment.

A roll call being necessary, the amendment was adopted by the following vote:

In favor of adoption: Counsellors Barnes, Baumhauer, Branch, Brunson, Cannon, Carter, Chenault, F. L., Chenault, John, Clyde, Daves, Davis, Donald, Dan, Donald, Joe, Finney, Gibson, Gill, Gipson, Godard, Guest, Hill, R. L., Hodges, Johnson, Jones, Kennedy, Killingsworth, Littlejohn, Lynch, Martin, McNease, Moore, Morgan, Moss, Neal, Parker, Riggs, Robinson, Rucker, Salter, Shell, Sherrill, Simpson, Stallworth, Treherne, Underwood, Weldon, Whiteside, Wilkerson, Wilson, Frank, Wilson, W. E., Woodruff. Total 50.

Delegates: Barron, Benson, Brantley, Browne, Burleson, Burwell, Byrne (Montgomery), Byrne (Sumter), Calix, Carraway, Clark, Clemmons, Cohen, Coleman, Couch, Dawson, DeShazo, Donald, Dunn (Elmore), Elmore, Emfinger, England, Frantz, Gilchrist, Goode, Graham, Hanby, Harris, Hawley, Humphries, Hunt, Hyder, Israel, Johnson, Jones, Jordan, Killian, Lightcap, Mason, McLaughlin, Michaelson, Mitchell, Montgomery, Mudd, Murphy, Nelson, Nettles, Nichols, Noble, Phillips, Pittman, Price, Rowe, Sellers, Sheppard, Simpson, Smith (Montgomery), Stanley, Steinberg, Strandell, Tew, Thomas, Tysinger, Ward, Williams, Windham, Yelton. Total 67.

Opposed: Counsellors Abbott, Caldwell, Carmichael, Collier, Crawford, Denison, Dodson, Glenn, Hill, R. C., Nickerson, Partlow, Ramey, Segrest, Timberlake, Watson, Williams. Total 16.

Delegates: Cameron, Galbraith, Lawrence, Linn, Rayfield, Stock. Total 6.

ELECTION OF STATE HEALTH OFFICER

The term of office of the State Health Officer having expired, the Board recommends that Dr. D. G. Gill be elected for a five-year term, as provided by authority in Title 22, Section 9 of the 1940 Code of Alabama.

The Association confirmed the election of Dr. D. G. Gill as State Health Officer.

APPOINTMENTS TO BLUE CROSS-BLUE SHIELD

Since the term of Dr. Jacques H. Baumhauer, Mobile, will expire February 28, 1958, and he cannot succeed himself, the Board nominates Dr. James G. Donald, Mobile, to succeed Dr. Baumhauer for a term of three years beginning February 28, 1958.

Since the term of Dr. Luther Davis, Jr., Tuscaloosa, will expire February 28, 1958, and he cannot succeed himself, the Board nominates Dr. Albert E. Casey, Birmingham, to succeed Dr. Davis for a term of three years beginning February 28, 1958.

The Board recommends approval by the Association of these nominations.

The nominations were approved.

PHYSICIANS' ADVISORY BOARD TO THE
UNIVERSITY OF ALABAMA

Since the term of Dr. William D. Anderson, Tuscaloosa, will expire July 28, 1957, the Board nominates Dr. Anderson to succeed himself for a term of five years beginning July 28, 1957.

The Board recommends approval by the Association of this nomination.

The nomination was approved.

CHANGES IN THE CONSTITUTION OF THE ETOWAH,
JEFFERSON AND MORGAN COUNTIES MEDICAL
SOCIETIES

The above named County Medical Societies have adopted certain changes in their constitutions, and the Board recommends that the Association approve the new constitutions.

The amended constitutions were approved by the Association.

RESOLUTION
(Salk Vaccine)

Whereas, Salk vaccine for the prevention of paralytic poliomyelitis has been shown to be safe and effective, and

Whereas, Nationwide about twenty-five per cent of the cases of paralytic poliomyelitis occur in individuals over twenty years of age, and

Whereas, The American Medical Association is urging all physicians to promote the use of the Salk vaccine not only in the young age groups, but also in the age group twenty to forty, therefore be it

Resolved, That the Medical Association of the State of Alabama endorse the use of Salk vaccine in all citizens of the state aged forty or less, and urge its members by all possible means to encourage its use.

The Board recommends adoption of this resolution.

The resolution was adopted.

RESOLUTION
(Blue Cross-Blue Shield)

Whereas, The medical profession of Alabama long has had an interest in the effective operation of Blue Cross-Blue Shield of Alabama, and

Whereas, The continued efficient functioning of Blue Cross-Blue Shield of Alabama should be of personal concern to every practicing physician in this state, and

Whereas, Several competitive programs by private and governmental agencies have arisen, such as the Medicare plan, and,

Whereas, Public demands for prepaid hospital and surgical insurance are subject to change as is the economic situation, therefore be it

Resolved, That the Jefferson County Medical Society requests the President of the Medical Association of the State of Alabama at the convention in April 1957 to appoint a committee to study the organization and operation of Blue Cross and Blue Shield of Alabama in order that the membership may be better informed of its vital function, to make comparative analyses of the Alabama program with those of other states of comparable economic condition, and to report its findings at the next annual session, along with any recommendations for strengthening, extending or altering the program of Blue Cross-Blue Shield of Alabama.

The Board recommends adoption of this resolution.

The Alabama Pediatric Society has requested that a similar committee be appointed. The above action of the Board will attain that end, and recommends adoption of this resolution.

The resolution was adopted.

RESOLUTION
(Jefferson County)

Whereas, The voting delegates of the Medical Association of the State of Alabama in April 1956 amended an ordinance of the Constitution of said organization to require the payment of \$50.00 in annual dues for members of the Association not specifically exempted by his County Medical Society, and,

Whereas, Annual dues of \$50.00 per annum across the board appears to be excessive and above those of many comparable state medical associations, and,

Whereas, Said \$50.00 annual dues will impose a hardship upon many members of the Medical Association of the State of Alabama and will discourage new memberships, and,

Whereas, the amended ordinance makes no exceptions for those senior physicians who have attained the age of 70 or more and who traditionally have been exempted by County Medical Societies, the State Association and by the American Medical Association, and,

Whereas, The amended ordinance makes no exceptions for those qualified residents and second year interns who should be encouraged to participate in organized medicine, and,

Whereas, the membership was not given advance notice of the proposed increase, the proposed uses of the additional funds were not explained and justified, and the membership had no chance to ratify the proposal, therefore be it

Resolved, That Jefferson County Medical So-

ciety moves and urges passage of a motion to repeal Section 1 of the amended ordinance pertaining to the dues of members and Counsellors, and asks that a more realistic plan be submitted to the membership for ratification and that such plan give consideration to the members over 70, to residents and qualified interns, and to full-time medical college faculty and Veterans Administration members who have no consultation practice.

RESOLUTION
(Sumter County)

Whereas, The voting delegates and Counsellors from the Sumter County Medical Society opposed at the April 1956 meeting of the Medical Association of the State of Alabama the amendment to the Constitution requiring payment of \$50.00 annual dues, and

Whereas, This action is considered by us to be high-handed and unrealistic, and

Whereas, We have studied the resolution of the Jefferson County Medical Society recently adopted condemning this amendment, therefore be it

Resolved, That the Sumter County Medical Society at its regular meeting on April 2, 1957 concurs in the above mentioned resolution.

The matter of dues for residents and interns has been handled by the Committee on Revision of the Constitution. The Board feels that there may be a necessity of providing some type of membership, other than regular full membership, for young research men and for physicians on temporary assignments in the state. It therefore recommends that this resolution not be adopted, but that the President appoint a committee to study the possibility of membership classification for these men.

A resolution concerning increased dues was also introduced by the Sumter County Medical Society. It is believed that amendments from the Committee on Revision of the Constitution and the action on the Jefferson County resolution would lead the Board to recommend non-adoption of this resolution.

The Chair recognized Dr. Byron Glenn who made the following comments on the Jefferson County resolution.

At the 1956 meeting in Birmingham the \$50 dues ordinance was passed. I voted for the increase since I felt that it would enhance the prestige and operation of the Medical Association of the State of Alabama.

After going through the recent period of trying to collect these dues, the story is a bit different. Although the entire membership of Jefferson County paid state dues, with the exception of one V. A. member who is not required to be a member of any local organization, the protests were severe.

A check was mailed this month to Dr. Cannon for \$25,470, more than a fourth of the proposed budget. We kept \$23,678 for our own operations, including three dinner meetings. Thus our own dues can be easily reduced by \$10 or \$15 by

dropping that portion that pays for dinner meetings which we find effectively stimulates attendance.

The membership feels that the dues schedule enacted in haste last April contained several oversights. Some of these are being corrected by exempting those over 70, and by the constitutional change providing for residents and interns. But the full-time Medical College faculty and V. A. men without consultation practice have not been taken care of, and those members who are unable to pay all at once who wish to pay on the installment plan. Try calling some of these men to get them to pay up at the last minute and see the answers that you get.

We have the cart before the horse—we collect the money then make the budget afterwards. Wouldn't it be better to see what we *needed* money for, then assess the membership? To have more money than you know what to do with encourages bad practices.

Careful study has been given to the proposed new budget recommended by the executive secretary. It has been compared with the audit contained in Dr. Cannon's report.

We feel that there are several questions about the proposed budget which need answering.

Mr. Dozier said this budget was "made without proper background experience or figures," that it was only a guide and that "it can be and it often must be revised." With that we heartily agree.

Let's look at a few specific items.

The Association operated on a budget of \$59,305.56 last year. The proposed budget calls for an expenditure plus reserve totaling \$100,210. That is almost \$41,000 increase—and that's a terrific jump. Of the \$100,210, there is \$15,000 reserved for a building fund and another \$4,910 in surplus. Each division of the Association provided adequately, if not generously, for its needs.

For example, salaries last year totaled \$19,200. The new budget shows \$33,200 for salaries—an increase of \$14,000. That includes the modest honorarium of \$1200 for Dr. Cannon, the same as it has been for years, for his fine services as secretary-treasurer and as editor of the Journal.

The proposed budget was based on 1,600 members at \$50.00 each. We are advised that a total of 1,619 paid dues for 1957, 49 did not pay up and 55 died. Jefferson County exempted 72 members over the age of 70 and paid full dues for 508 and a part payment for one fellow who will send along the balance shortly.

Incidentally, there were 2005 members listed in the transactions for 1956. Mr. Dozier states that there are 281, I believe, over 70. So if we take into account those exempted we still have some 220 to account for.

If the over 70 members are exempted, this leaves 1,410 members to pay dues. At \$50 each this gives an income from dues of \$66,900. Add to this \$20,210 estimated from other sources and you get a total of \$87,110, or \$13,000 less that originally planned.

If dues are on a more realistic basis, such

as \$40 per year, with 1,338 members paying dues, income would be \$53,520 from dues, \$20,210 from other sources or a total of \$73,730. This is an increase of \$14,000 over last year—and the increase from \$20 dues is not so jolting.

In closing, I would like to offer a few suggestions:

1. Every effort should be made to place the state Journal on a break-even financial basis. Other state Journals with which we are familiar do not lose money as does Alabama. Some, in fact, clear a little. If that can be done, it will save about \$3,000.

2. Printing of the Transactions is estimated at \$2200 this year. I do not believe the membership would object to publishing the transactions as an issue of the Journal or special issue, with sufficient ads to pay the cost, with the saving of another \$2,200.

3. A staff of eight is proposed. Salaries for clerk and secretaries range from \$3000 to \$4500. This would be above the prevailing rate in Birmingham.

There is a \$4500 secretary in the Bureau of Administration and in the Public Relations department an administrative assistant at \$4500 for nine months. For economy's sake it may be possible to consolidate these two and even to pay slightly more to get a real top quality public relations man.

Also there seems to be two part-time secretaries at a total of \$3,420. It may be that these positions can be consolidated into one full-time secretary at a saving.

4. We believe the membership should have specific proposals for a state building. Florida Medical Association built a \$100,000 building recently. The Tennessee Association building cost \$60,000.

Assuming a goal of \$100,000 or \$150,000 for the building, this could be set up for amortization over a 15 or 20 year period with income of \$8000 or \$9000 a year earmarked for that purpose rather than \$15,000, a year. That too, would enable a cut in the budget and thus the annual dues.

There are other lesser items but I believe these are sufficient to suggest that there is room for revising the budget and for reducing annual dues and still have a sound, progressive state association.

Dr. Sam Windham spoke in support of the Association's 1956 action.

There being no further discussion, on motion to approve, the Board's recommendations on the Jefferson and Sumter County resolutions were adopted.

A RESOLUTION (Blood Program)

Whereas, The people of Alabama, through their physicians and hospitals, for a period of seven years, have enjoyed the benefits of a well organized blood program; and

Whereas, This program has been made possible

by the generous financial aid of the American National Red Cross and its local chapters; and

Whereas, This program has been characterized by a fine spirit of cooperation displayed by the national and local Red Cross organizations in their relations with the medical profession, therefore be it

Resolved, That this Association express its appreciation to the American National Red Cross and its local chapters for their liberal contributions and the unusually cooperative spirit in which they have joined with the medical profession in this community service; and be it further

Resolved, That this Association does hereby assure the American National Red Cross of its continuing interest and support of this blood program.

The Board recommends adoption of the resolution.

The resolution was adopted.

A RESOLUTION (Alabama Association of Pathologists)

Whereas, The Medical Association of the State of Alabama has declared that the practice of pathology is the practice of medicine, and

Whereas, Pathologic services may be rendered in or outside of a hospital, and

Whereas, Such pathologic services can be performed only by or under the supervision of physicians, and

Whereas, The Medical Association of the State of Alabama has contracted for the physicians of the state of Alabama with the Department of Defense to supply medical services to dependents of the uniformed forces under Public Law 569 of the 84th Congress (otherwise known as the Dependents' Medical Care Act) and

Whereas, Certification of medical services rendered can only be made by physicians, be it

Resolved, That the Medical Association of the State of Alabama hereby declares that pathology is a medical service under the terms of the contract which has been negotiated between the Medical Association and the Department of Defense and as set forth in Contract No. DA-49-007-MD-805, dated February 21, 1957, issued by the Department of Defense in compliance with the Dependents' Medical Care Act, and fees for such services wherever rendered must be paid to the physicians rendering the services.

The Board recommends adoption of the resolution, but believes negotiation with the Department of Defense will be necessary to correct it.

The resolution was adopted.

A RESOLUTION (By Dr. Earl B. Wert)

Whereas, The science of the diagnosis and causes of illness and of death in human beings is the science of medicine as it is known and practiced, and

Whereas, This practice of medicine is limited, by custom and by law, to those duly licensed

physicians holding the degree of Doctor of Medicine, and

Whereas, Cases of illness and of death cannot be evaluated, consistently and completely, by those other than duly licensed doctors of medicine, and

Whereas, The attempt, by those other than duly licensed doctors of medicine, to solve problems as to the cause of illness and of death will result in serious miscarriages of justice, incriminating the innocent, and failing to detect the criminal, and

Whereas, Such misuse of the science of medicine is of the gravest concern to the practicing physicians of the state of Alabama, be it

Resolved, That (1) the Medical Association of the State of Alabama is opposed to the present practice of permitting those other than duly licensed doctors of medicine to attempt to resolve these medical problems. (2) Further, be it *resolved* that, in the interest of the sound practice of the science of medicine, the practicing physician of this state of Alabama accept the responsibility for the medical duties of the Coroner's Office. (3) Further, be it *resolved* that, the physicians of this state continue to develop their interest and skill in the science of forensic medicine, to serve more effectively the people of this state in the matters incident to the practice of medicine.

As amended the Board recommends the adoption of this resolution.

The resolution was adopted.

A RESOLUTION

(Dr. John L. Carmichael)

Whereas, The Medical Association of the State of Alabama wishes to assist the government of the United States in providing medical services to the dependents of military personnel in their home town, and

Whereas, The Association believes that the provision of the directive implementing the Medicare Program which forbids to the dependent the payment of any part of his or her bill if he or she uses a non-participating physician is an unnecessary limitation of the choice of physician and undue coercion of the physician to become a participating physician, and

Whereas, A service type of insurance contracts functions well in many areas of the country, including Washington, D. C., although the patient of the non-participating physician received the amount called for in the fee schedule, therefore be it

Resolved, That the Medical Association of the State of Alabama instruct the State Board of Censors, who are its negotiating body, to enter into a contract with the government accepting a reasonable fee schedule but insisting that the dependent who chooses to use a non-participating physician be paid the amount which the fee schedule allows for the service rendered.

This request has already been submitted to the Defense Department and the Board has been advised that during the present contract this is

not possible. The matter will be considered again when re-negotiation takes place.

The Association took cognizance of this expression of the Board.

A RESOLUTION

(Jefferson County)

Resolved, That a standing committee of the Medical Association of the State of Alabama be established and designated as the Dues and Finance Committee.

This committee shall consist of the four Vice-Presidents of the Association and two members from each division. The two members elected from each division are to serve for a period of three years each. These district members are to be elected by all the members from the district present at the annual state convention of the Association. The Senior Vice-President will be the chairman of this committee.

The Chairman of the Board of Censors, the President and the President-Elect shall be ex-officio members of this committee without the right to vote.

The duties of this committee shall be to review the audit of the Association, to propose the annual budget, to make recommendations regarding dues, and to supervise operations of the Executive Office. The Executive Secretary shall be directly responsible to this committee concerning all fiscal matters of the Association. All findings, actions and recommendations of this committee shall be submitted to the Board of Censors for consideration and action prior to presentation to members at the annual session. This committee will also act as a reviewing committee of the activities of the Association.

This committee shall meet at least 60 days before and during the annual meeting of the Association or when called by the chairman or by four members.

The Board concurs in the idea that there be a review committee from the membership of the Association. The proposal that the Executive Secretary be directly responsible to this committee presents certain insurmountable difficulties in the present organization of the Association in that the Executive Secretary is charged with many diverse duties, such, for example, as in the legislative field. Legislative activities must demand the major portion of his time for the coming year, and this should be directly under the supervision of the Board. The Board, therefore, recommends that the President of the Association appoint a Review Committee consisting of the Vice-Presidents and two members from each division of the Association, with the President, President-Elect, and Chairman of the Board of Censors as ex-officio members without voting power, to review the audit and budget, to make recommendations regarding dues, and to submit their recommendations to the Board of Censors for consideration and action prior to the next annual meeting. At the next annual meeting the members from each division shall be elected by those in attendance at the meeting from said divisions. Future duties and powers of said re-

view committee shall be enumerated at the next annual session.

The Board recommends the adoption of this substitute for the resolution submitted.

The Association adopted the substitute as recommended by the Board.

PROPOSED AMENDMENT TO ORDINANCE

The following amendment to an Ordinance of the Medical Association of the State of Alabama was proposed by the Medical Society of Montgomery County.

Amend ordinance relating to increase in dues by adding to Section 1 thereof the following: Provided that a member who has reached 70 years of age and who has been continuously identified with the Association for 25 years shall be exempt from the payment of dues.

Present ordinances provide the authority for county societies to exempt members from payment of dues, and the Board therefore recommends that this resolution not be adopted.

The Board's recommendation was concurred in. Part I of the Board's report was approved.

PART II

REPORT OF THE BOARD OF CENSORS AS A BOARD OF MEDICAL EXAMINERS

In this field of its activities the Board submits the following statistical report for 1956:

Certificates of qualification granted	159
1. Physicians passing examinations June 19-21, 1956	88
(a) Certificates granted	9
(b) Certificates to be granted after internships	79
(c) Chiroprody certificates granted	2
2. Certificates granted applicants completing internships July 1, 1956	81
3. Physicians licensed through reciprocity	61
4. Physicians received through Nat. Bd. of Med. Exam.	6
5. Narcotic registration restored	1
6. Chiroprody renewal licenses issued	38

CERTIFICATES OF QUALIFICATION GRANTED
JUNE 1956 APPLICANTS

Allen, Thomas H.	O'Connor, Vincent J., Jr.
Bilsten, George G. B.	Robinson, Leonard
Brooks, Ivy O. R.	Singletary, Henry P.
MacCannell, Bruce	Waller, William C.
Montgomery, Brian K.	

CERTIFICATES TO BE ISSUED AFTER ONE YEAR
OF SATISFACTORY INTERNSHIP

Adams, Robert B.	Champlin, David B.
Ausbon, William W.	Chunn, Van D., Jr.
Baker, Omer A.	Clark, Eugene C.
Barnes, Radford R.	Clevenger, Charles E.
Barnett, Guy O.	Coleman, Solon L., III
Earton, Morris, Jr.	Copeland, Leroy V.
Bearman, Alvin J.	Copeland, Sage D.
Bennett, Austen L., III	Crawford, Willis V.
Blackwell, Jack	Cross, John T.
Bowling, Robert S., Jr.	DeBardéleben, P. C., Jr.
Carmichael, Daniel E.	Driggers, Roy M.
Carpenter, Robert H.	Faulkner, Gerald D.
Carter, John C.	Faulkner, James S.

Feigelson, Charles I.	Nicholas, Francis E.
Foy, Robert E., Jr.	Norman, Patricia H. F.
Goldberg, Irwin R.	Pappas, Alonza R.
Hale, Ernest E., Jr.	Ramsey, Charles C.
Hardwick, Charles W.	Reai, Jack D.
Hawkins, Donald B.	Rencher, James L.
Haynes, John E.	Rose, Ralph H.
Hiatt, Wood C.	Royal, Orren L.
Holmes, William C., Jr.	Simmons, Earl M., Jr.
House, Ben Fred	Smith, Curruth R., Jr.
Howell, Charles B.	Smith, John H.
Irons, George V., Jr.	Smith, Patrick H.
Johnson, James C.	Sperling, Adelle B.
Kanter, Philip D.	Tarpley, William T.
Keelyn, Julia A.	Tidwell, Owen K.
Litt, Richard E.	Tyndal, Edward C.
Lombardo, Carlos R.	Vaughan, Billy L.
Long, Needham L.	Vaughn, Betty J.
Marks, John S., Jr.	Waldheim, Hugo, Jr.
McAnnally, Billy D.	Walker, L. G., Jr.
McArthur, Katrina T.	Weston, James H.
McDowell, Holt A., Jr.	Whetstone, Jack M.
McLaughlin, Max V.	White, Grover W.
Metts, Vergil L., III	White, Roy S.
Miller, John M., III	Wideman, Gilder L.
Mitchell, James S., Jr.	Young, Lewis Stribling
Morris, Peter W.	

CERTIFICATES OF QUALIFICATION GRANTED
1956 CHIROPODY APPLICANTS

Samuel, Edward M.	Willis, Isaac E., Jr.
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CERTIFICATES GRANTED APPLICANTS
COMPLETING INTERNSHIPS JULY 1, 1956

Alford, Charles A., Jr.	Klein, Robert F.
Bancroft, Josiah D.	Knowles, John L.
Battle, Earl P.	Larrimore, Roy W.
Beaird, Joseph B., Jr.	Litwin, Martin Stanley
Beavers, Fred W.	Lokey, Robert H.
Benton, John W., Jr.	Long, R. T. L.
Brown, Howard D.	Lowe, Richard T.
Camp, Charles L.	McAdory, W. C., Jr.
Campbell, Ernest S., Jr.	McElroy, James B.
Campbell, Lamar M.	McElroy, Travis R.
Colvin, Charles H., Jr.	Mitchell, William S.
Cox, Rabon B., Jr.	Moore, Ewing J., Jr.
Dean, William M.	Morgan, Charles C.
Dillon, Hugh C.	Mozley, Paul D.
Diseker, Maude	Nolen, Jack R.
Dowdy, Elizabeth G.	Null, Francis C., Jr.
Dowe, Calvin R.	Overstreet, Donald C.
Finley, Sara W. C.	Owens, Frank C.
Fitts, Floyd O., Jr.	Patterson, Herman C.
Fitzgerald, R. T.	Pickering, John M.
Fulton, William F., IV	Prosch, Gus J., Jr.
Gay, Andrew J., Jr.	Rowe, Stephen W.
Gibson, Herbert D.	Rudd, George E.
Gravlee, Leland C., Jr.	Russell, Robert J.
Hall, Joe E.	Sanders, Buford B.
Hinton, John L.	Sanders, Joe D.
Hodges, Durwood M.	Scofield, George F.
Holding, Bruce F., Jr.	Selikoff, Eli
Holifield, Reese M.	Simpson, Oscar G.
Holliman, James D., Jr.	Singleton, Chester E.
Hubbard, John L., Jr.	Smith, Charles H.
Hudnell, Armstead B., Jr.	Steinberg, Morris
Israel, W. D. C.	Stewart, Walker B.
Keel, Hollis C.	St. John, J. W.
Keeton, J. E.	Sturkie, Henry R., Jr.
Kimbrough, John G.	Sullivan, Percy G.
	Taylor, Thomas H.

Terry, Aubrey E. Veazey, Charles F.
Thompson, James C. Wells, Buren E.
Todd, John N., III West, Young U., Jr.
Tyndal, Charles M. Wilder, Guy B., Jr.

Ward, William Q.—Ga. July 16, '56
Zenger, George H.—Miss. Jan. 20, '56
Zickler, James B.—Tenn. Dec. 20, '56

RECIPROCITY APPLICANTS APPROVED DURING
THE CALENDAR YEAR OF 1956

Allen, Herbert V., Jr.—Ohio Nov. 13, '56
Berg, Ernestine H.—Ky. Oct. 1, '56
Berner, Clifford L.—Ky. Oct. 31, '56
Berson, Robert C.—Tenn. Aug. 1, '56
Bogue, Charles A.—Ohio June 25, '56
Boon, Robert H.—Ark. Nov. 21, '56
Brown, Ernest L.—Tenn. Feb. 6, '56
Brown, James L.—N. C. June 18, '56
Browning, James P.—Ark. Aug. 27, '56
Calhoun, Thomas J.—S. C. June 29, '56
Calvert, Francis N.—N. B. M. E. Oct. 9, '56
Campbell, Lachlan L.—N. B. M. E. June 29, '56
Clifford, William S.—Va. Sept. 21, '56
Cornell, William S.—Va. Aug. 27, '56
Daniel, Jack D.—Ga. July 23, '56
de Juan, Eugenio—Ga. Feb. 27, '56
Doss, Wilford C., Jr.—Miss. May 24, '56
Dunklin, J. H., III—La. Aug. 6, '56
Dyer, Herbert R., Jr.—La. July 16, '56
Elmore, Horace L.—Miss. June 25, '56
Fleck, Richard J.—La. June 29, '56
Flowers, Neal S.—La. July 20, '56
Giamalva, Louise P. M.—La. Aug. 11, '56
Hamrick, Leon C.—Ga. May 24, '56
Hereford, Sonnie W., III—Ga. Sept. 12, '56
Hyder, Nat E., Jr.—Tenn. Feb. 27, '56
Jackson, Laurence S.—Ind. Mar. 19, '56
Kelly, Norman—La. Feb. 1, '56
Leavel, Boude B.—Ga. Jan. 24, '56
Lehner, John J.—N. Y. Dec. 20, '56
Lupton, Charles H., Jr.—Va. July 16, '56
Marx, Ralph L.—Okla. Oct. 3, '56
McAtee, John D.—Ill. Jan. 20, '56
McCandlish, Carl A.—La. May 7, '56
Meredith, William R.—Ark. Jan. 25, '56
Monaco, Angelo R.—Md. Jan. 20, '56
Morgan, Samuel K.—La. Aug. 14, '56
Morriss, Jesse E., Jr.—La. Apr. 23, '56
Moss, Charles T., Jr.—N. B. M. E. Oct. 23, '56
Mullins, David M.—Tenn. Nov. 26, '56
Mullins, Henry C., Jr.—La. July 16, '56
Mullins, James N.—La. Feb. 17, '56
Peeler, Milton B.—Tenn. Jan. 26, '56
Perkins, Rex B.—N. B. M. E. Apr. 16, '56
Phillips, James D.—Tenn. May 24, '56
Pitts, Juanita G.—Md. Jan. 20, '56
Pitts, William J.—Tenn. Feb. 1, '56
Price, James H.—Tenn. Mar. 5, '56
Qualls, Gene T.—Tenn. Nov. 2, '56
Quattlebaum, Robert B.—Ga. Apr. 25, '56
Richard, M. J.—Mo. May 7, '56
Romendick, Samuel S.—N. Y. Mar. 16, '56
Schneider, Harold J.—Ohio Feb. 17, '56
Scofield, Paul D.—Ohio May 11, '56
Sherwood, James W.—Tenn. Apr. 9, '56
Simpson, William F.—N. B. M. E. July 2, '56
Smith, Charles E.—Miss. Aug. 6, '56
Smith, Robert J.—Tenn. Jan. 20, '56
Stevenson, Edward W.—Md. Nov. 13, '56
Stough, Austin R.—Tenn. Aug. 22, '56
Stuckey, Robert F.—N. B. M. E. July 16, '56
Thompson, Oscar W., Jr.—Ky. Aug. 21, '56
Trawick, Zachary T., Jr.—Tenn. Sept. 12, '56
Turnbull, Donald C.—Ill. June 18, '56

CHIROPODY RENEWAL LICENSES GRANTED FOR 1956

Alexander, Isadore H. Lewis, Martin
AuCoin, William J. Miller, Charles L.
Benitez, George W. Miller, John
Blotzer, Ellen L. Oxford, Herman R. A.
Blotzer, John S. Pearson, Joe P.
Clark, George E. Peterson, Bessie C.
Coleman, Jasper C. Plevine, Erich H.
Cooper, John M. Rae, Hugh
Crowley, Coy H. Riccio, Peter D.
Crowley, Gentry B. Rollings, Harry H.
Davis, Edith M. Sealy, Ariel L.
DeViso, Viola Sealy, Edward E.
Dixon, Mildred K. Sealy, Elizabeth P.
Draper, William L. Silverman, Irving
Edwards, Charles M. Veres, John G., Jr.
Frank, Stanley T. White, Juddie B.
Knowlton, Ira Lee Wilton, Paul D.
LeCroy, Thomas H. Wittick, Arthur Jr.
Leighty, Fred G. Wright, Thomas L.

Part II of the Board's report was approved.

PART III

REPORT OF THE BOARD OF CENSORS AS A
STATE COMMITTEE OF PUBLIC HEALTH

D. G. Gill, M. D.

State Health Officer

The reports which follow record the activities and achievements of the Health Department in the past year. They indicate that, in general, Alabamians enjoyed good health during 1956.

For the second straight year, mortality from tuberculosis reached a new low, and tuberculosis was not one of the ten leading causes of death. With two exceptions, mortality from other communicable diseases showed a downward trend. Morbidity of communicable diseases for the most part either remained relatively stable or was down from 1955.

The maternal mortality rate of 7.8 per 10,000 deliveries was the lowest ever recorded in the state. There were 66 maternal deaths as compared with 92 in 1955. The neonatal mortality rate was also at a record low. The death rate remained low, although it was up slightly from 1955's all-time low. The birth rate remained at a high level.

There were 12 deaths from measles and one from scarlet fever. Both are up from 1955. There were fewer cases of diphtheria than in 1955, but the number is still too large in view of the total protection against this disease which is available. Alabama was second only to Texas in the number of cases of rabies reported, and there was one human death from rabies. Death and disability rates from chronic diseases and accidents are increasing.

In short, we have effective programs of communicable disease control which must be maintained, perhaps strengthened in some areas. At the same time new efforts need to be directed

against such problems as heart disease, cancer, health of the aging and accident prevention.

The poliomyelitis vaccine distribution program represented the greatest effort against a single communicable disease. County health departments and private physicians did a tremendous job in inoculating that part of the eligible population which requested immunization. Nineteen fifty six was the first full year of operation for the program. It was also the year in which the lowest number of cases of poliomyelitis occurred in Alabama since 1947. While the decline cannot be attributed wholly to the immunization program, national statistics make it apparent that Salk vaccine is an effective preventive measure. The need here is probably for intensified educational programs to help insure that all of the susceptible population receive protection.

Construction of hospitals and related medical facilities continued at a steady pace. An encouraging aspect of this program is that there appears to be some stirring of interest in the construction of nursing homes and chronic disease hospitals which are probably our most-needed medical facilities now.

In the field of veterinary public health, an animal disease reporting system was inaugurated in cooperation with other agencies.

The shortage of qualified personnel which hampers public health activities in many areas is a problem that appears to be common to all levels of government and to private industry. There is a greater demand than ever for technically trained workers in every field, and schools and colleges are not graduating enough people to meet the demand. This is a long-range as well as a present-day problem.

POLIOMYELITIS VACCINE DISTRIBUTION

Federal sponsorship and financing of a mass poliomyelitis immunization program for persons under age 20 and expectant mothers began in August 1955. During the early phases of this program, the use of Salk vaccine was restricted in Alabama to the age group 5 through 9. As vaccine became more plentiful the age limitations were expanded. At the beginning of 1956, vaccine was available on a free basis to each health department and physician in the state to administer to anyone between the ages of six months through 14 years, and expectant mothers. Physicians were permitted to charge only for their services in administration to their private patients. On June 1, 1956, the age priority group of the poliomyelitis vaccine distribution program was expanded to the full extent of the Federal law. This provided vaccine for every person up to the twentieth birthday and expectant mothers, and involved an estimated population of 1,494,361, or almost one-half of the state's total population.

Inoculations reported under this program for the calendar year 1956 totaled 946,514. Of this number, 378,811, or 40 per cent, were first inoculations; 370,137, or 39.1 per cent, were second inoculations; and 197,566, 20.9 per cent, were third or booster doses. Of this total, 785,808, or 83 per cent, were reported as given by local health departments and 17 per cent were report-

ed as given by physicians to their private patients. Three and one-half per cent of the total inoculations were administered to expectant mothers.

From the beginning of the use of Salk poliomyelitis vaccine in Alabama to the end of December 1955, 408,828 inoculations were reported to the State Department of Public Health. By the end of December 1956, reported Salk inoculations under all programs totaled 1,355,342. During 1956, 1,005,661 doses of vaccine were distributed by the State Health Department to the sixty-seven county health departments. Each of these units in turn supplied the needs of private physicians in their areas with vaccine upon request. Total vaccine distributed under the Federal program amounted to 1,266,004 doses at the close of the calendar year, and 86 per cent of this vaccine had been accounted for by recorded inoculations which had been officially reported.

The urgent need for adequate supplies, equipment and personnel, particularly public health nurses, was brought acutely to the forefront during the intensive efforts of each local health department in this special program. In mass immunizations, modern preventive medicine requires adequate facilities and equipment for using individual inoculation technique which standard medical practice demands. Funds made available through the Federal Poliomyelitis Vaccination Act were utilized to provide steam pressure sterilization facilities, additional syringes, needles and other supplies to local health units to enable them to conduct safely the mass clinics which were necessary during this period of intensified poliomyelitis vaccination activity.

A total of 103 cases of poliomyelitis reported to the State Health Department during 1956 indicated a rather low incidence of the disease, since 185 cases were reported in 1955 and 370 in 1954. Obviously, the small number of cases reported this year makes any evaluation of the effectiveness of the vaccine impossible; however, certain aspects of these cases are of interest. Eleven per cent of the cases occurred in persons over age 20, 47 per cent in those under age 5. Apparently, the term "Infantile Paralysis" was still applicable to this disease in Alabama in 1956, although a few adults continued to be stricken in spite of its predilection for children. Sixty of the cases occurred in males, 43 in females. Sixty-two were reported as paralytic cases and 41 as non-paralytic. Of the 62 persons stricken with paralytic poliomyelitis in 1956, 58, or 93 per cent, had received no Salk vaccine.

Not a single serious reaction to the administration of the Salk vaccine has come to our attention in Alabama. We consider this a remarkable tribute to the safety of this immunizing procedure.

HOSPITAL PLANNING

The activities of the Hospital Planning Division lie within three separate but related fields—hospital and medical facilities survey and construction, hospital licensure and civil defense. Although there are certain overlapping duties, the division is organized with a technical section, a licensure section, and a clerical section. Each

of the three sections contributes to civil defense activities.

HOSPITAL CONSTRUCTION

The Hospital and Medical Facilities Survey and Construction Program is conducted on the basis of the Alabama Master Hospital Plan which was originally prepared in 1947 and is revised annually after an annual survey and inventory of hospitals, medical facilities and related facilities. In 1955, the plan was revised and enlarged to include nursing homes, chronic disease hospitals, rehabilitation centers, and diagnostic and treatment centers as provided by the 1954 amendments to the Hill-Burton Act.

General Hospitals.—The general hospital construction program in Alabama has, since its inauguration in 1947, been roughly divided into three phases. The first phase, beginning in 1947 and extending through 1950, saw the major emphasis placed on construction of new facilities, additions, and replacements in the major hospital centers such as Birmingham, Mobile, Montgomery and Tuscaloosa to provide base hospital facilities. The second phase with major emphasis being placed on the construction of hospitals in the rural areas not previously served by hospitals began in 1951 and was essentially completed in 1955, although there are still six counties that do not have a general hospital. Continuing efforts are being exerted to meet the needs of these counties.

The third phase of the general hospital construction program was begun in 1956 and is expected to continue into the foreseeable future. Previous construction had virtually neglected those counties which have from 40 to 70 per cent of their general hospital needs filled. The increasing population coupled with the increased demand for hospital services required that these hospitals render a greater service to the point that many were becoming overcrowded at the same time their physical plants were gradually becoming obsolete. The third phase of the construction program is directed toward meeting these needs through additions, alterations and replacements. Of the 15 general hospital projects under construction or approved during 1956, eight were addition and alteration projects, three were replacement projects, and the remaining four were located in areas not previously served or in which additional facilities were necessary.

During the 1956 calendar year, a total of 280 general hospital beds were added to Alabama's public, non-profit and private hospitals bringing the total to 8,979 acceptable beds. Of these, 95 were added by the completion of one addition to a general hospital under the Hill-Burton program, while 185 beds were added through non-federally assisted construction. At the end of the year there were eight general hospital projects with 459 beds under construction, seven projects with 264 beds approved for construction, and the division had on file applications for 21 general hospital projects with a total of 762 beds.

Public Health Centers.—In 1956, three public health centers were completed. At the end of the year, four county health centers, one auxil-

iary health center, and two public health laboratories were under construction. On the same date five county health centers, one auxiliary health center, and one public health laboratory were approved for construction and the division had on file applications for seven additional health centers.

Tuberculosis Sanatoria.—Plans for the 150-bed Hale Memorial Sanatorium in Tuscaloosa were completed during 1956, and approval was granted for the construction of a 46-bed addition to the Jefferson Tuberculosis Sanatorium in Birmingham. In addition, the division has on file an application for a 100-bed addition to the Montgomery Tuberculosis Sanatorium.

Medical Facilities.—The first projects under the Medical Facilities Survey and Construction Program were approved by the State Board of Health on February 1, 1956. Due in large part to the accumulation of appropriations for two Federal fiscal years, a total of seven projects were approved on that date. Later in the year, two additional projects were approved by the Board.

Probably the greatest need in the field of medical facilities is that of nursing homes and chronic disease hospitals. At the end of the year two chronic disease hospitals with 80 beds and two nursing homes with 56 beds were under construction, while one nursing home with 50 beds and one chronic disease facility of 20 beds were approved for construction. In addition, the division had on file applications for seven chronic disease facilities with 187 beds and eight nursing homes with 231 beds.

Although funds for the construction of rehabilitation centers were limited, it was possible to approve and place under construction rehabilitation centers in Mobile and Huntsville. Although the division has no applications on file for additional rehabilitation centers, preliminary work was begun for a facility of this type in Montgomery.

Two diagnostic and treatment centers were approved during the year and one placed under construction. The division has on file applications for three additional facilities of this type.

Other Facilities.—Included within the Hill-Burton program are the construction of schools of nursing and mental hospitals. No projects of either type were approved during the year although the division has on file applications for four schools of nursing.

HOSPITAL LICENSURE

During the year licenses were issued to 135 general and specialized hospitals, 28 clinic hospitals, 91 nursing homes, and 1 maternity home. Of these 255 licenses issued, 228 were regular licenses. Temporary licenses were issued to 27 facilities with corrective action incomplete or for which replacements under the Hill-Burton program were being planned. No institutions were closed during the year for failure to comply with the regulations.

All of the 255 licensed institutions were inspected at least once during the year for compliance with the regulations and standards. Many

of the institutions with special problems were inspected two or more times during the year. In addition, approximately 40 field visits were made to agencies and institutions not licensed by the State Board of Health. These visits were in connection with the survey and inventory of hospitals and related medical facilities for the annual revision of the Alabama Master Hospital Plan.

In cooperation with the University of Alabama, the Alabama Hospital Association, the Alabama Association of Nursing Homes, and the Alabama Dietary Association, the division sponsored a dietary workshop at the University.

Revision of the licensure regulations for general and specialized hospitals and for nursing homes was inaugurated during the year. This work is scheduled for completion during the coming year.

CIVIL DEFENSE

The accomplishments in civil defense included the completion and publication of a manual of basic principles and procedures in casualty service planning. A manual for the organization and equipping of casualty service units was almost completed by the end of the year. Two other manuals were in preparation. One member of the division staff attended the Civil Defense Staff Officers School in Mobile.

MENTAL HYGIENE

In carrying out its program of community mental health, this division experienced four major developments during 1956. First, this was a year of continued strengthening of our mental health clinics: Muscle Shoals, Birmingham, Montgomery, Tuscaloosa, and Tuskegee each added staff—either full-time or part-time consultants. This had an immediate effect upon the patient load of these clinics. In fact, our clinics nearly doubled the number of cases over 1955. This was accomplished with an increase of 30 per cent in professional man-hours. The discovery that only 30 per cent more staff doubled a clinic's output can be attributed to the fact that the new employees had no administrative duties to perform and were, consequently, free to spend most of their time performing clinical services.

The second major development during 1956 was the establishment of a training program in Birmingham. We are prepared to give field placements for psychiatric social work students and clerkships (at a Master's degree level) and internships (at a Ph. D. level) in clinical psychology. The first student was received—an API student working toward his M. A. degree. The Birmingham training unit represents the Division of Mental Hygiene's first effort in attracting students, both in-state and out-of-state, to Alabama. We hope that, having experienced working in our program, many will return upon graduation. The training unit also serves as an orientation center for new clinic staff members in the state program.

A third significant development, also related to training, is the division's awarding of four training stipends or scholarships to students in psychiatric social work. Each student is obligated

to return to Alabama one year for each year he is awarded a scholarship. We recognize that Alabama must begin training her own workers through a stipend program, particularly since our state does not offer advanced training in psychiatric social work or clinical psychology.

The fourth development falls in the area of a tightening supply of trained mental health workers—psychiatrists, social workers and psychologists. With all states appropriating considerably more money for mental health programs, the short supply has continued to dwindle, and now we have another problem: The principle of supply and demand is forcing up salary scales at a rapid pace. In order for a state to stay in the market for new workers to man its expanding program, salary schedules must be revised annually—or more often.

In summarizing, our progress this year has been steady, with a few major developments. Personnel has been added. Our clinics are helping more children and adults who suffer from poor adjustment behavior. We have launched a training program in Birmingham for future mental health workers, and Alabama is now offering training stipends to its youth, who must go out of state to receive instruction in the field of mental health.

MACHINE TABULATION

The Division of Machine Tabulation continued to act as a service division, the nature of its work being to print, tabulate, process and analyze material for various bureaus and divisions, and some county health departments. This work is accomplished with duplicating and IBM equipment.

The regular weekly, monthly, quarterly, semi-annual, annual and special reports were compiled for bureaus and divisions. In addition, the reproduction unit of this division turned out printing for all units of the Health Department and some county units.

In summary, the division punched close to three million IBM cards in 1956, and checked them for accuracy. These cards were used numerous times for intermittent and manifold reports that are prepared as the cards are accumulated month by month. The reproduction unit printed close to seven million impressions for books, pads and forms of various descriptions.

PUBLIC HEALTH EDUCATION

The division attempted to continue its program of preparation and dissemination of information to the public, and performed various other extra services as well.

News releases were issued daily to local newspapers and radio stations, and to the wire services. These, as in the past, dealt with Alabama vital statistics, disease morbidity and special stories and events. Montgomery newspapers used an average of about one release issued by the division per day. No information is available on usage by newspapers in other parts of the state.

The division continued to send out one release weekly to daily and weekly newspapers. Preparation of the weekly Health Chat for the State Health Officer was discontinued during the year

when it was determined that it was no longer used by the Associated Press.

The weekly radio talk series was continued until December 1. The series was discontinued at that time when evaluation revealed that the talks were broadcast at times of day when there is a very small radio audience. Mimeographed copies of the scripts were and are used extensively in filling requests for information.

The film libraries of the division and the Division of Mental Hygiene were combined early in the year and a film librarian employed. The 320 films were booked for showing 1,912 times by county health departments, schools, individuals and community organizations. The films were shown to an estimated 110,000 viewers.

Cataloging and reorganization of the library were begun. It is anticipated that the library will be much more useful when this work is completed.

The staff worked with individuals who came to the office requesting information. Inquiries and requests for material received through the mail, in person and by telephone, averaging several a day, were answered.

The department's annual reports for 1954 and 1955 were edited, bringing the annual reports to current status. The director worked with other bureaus and divisions on preparation of various reports and papers. One special project was the preparation of a script for a 30 minute television broadcast in cooperation with Red Cross. The director also assisted in the preparation of the script for a film about tuberculosis. This film is for television showing.

COUNTY HEALTH WORK

During 1956, the problem of providing full-time health officer supervision to county health departments, although still serious, was less acute than in 1955. Of the 33 full-time health officers serving during this year, the number past 70 years of age was reduced from 15 to 10 by resignations, deaths and retirements. The number of counties served by practicing physicians as acting health officers was reduced from 12 to 9. Four new full-time health officers were employed during 1956, one of whose services was lost by resignation. The policy of combining the smaller counties into multiple units under the supervision of full-time health officer service was carried forward in 1956. Nineteen health officers served single county units during 1956 as compared with 21 in 1955. Five served two-county districts, eight served three-county districts, and one four-county district was placed under single health officer supervision. Only one county health department, Barbour, had no local health officer supervision.

The shortage of public health nurses in all county health departments remains acute. There has been no appreciable increase in the number employed during 1956 over the preceding year. The need for additional nurse consultant service is keenly felt.

Most counties are fairly adequately supplied with sanitation officer personnel. Two counties, Cleburne and Choctaw, have no sanitation offi-

cer service. In most areas, the fact that no consultant sanitation officer personnel is available makes it particularly hard for recently employed and inadequately trained personnel to carry out their duties effectively.

State and Federal funds are allotted to county health departments on a per capita basis with counties having small populations receiving proportionately more per capita than the more populous ones. The formula is as follows:

Population	Amount Per Capita	Not to Exceed
Less than 15,000	50c	60% of budget
15,000 to 20,000	45c	60% of budget
20,000 to 25,000	40c	50% of budget
25,000 to 35,000	35c	50% of budget
35,000 to 50,000	30c	40% of budget
50,000 to 75,000	25c	40% of budget
Over 75,000	20c	30% of budget

In 1956, county health departments were able to receive the full amount called for by the formula through a special \$100,000 Federal grant for administering the polio vaccination program. In 1955, the formula was placed only 92% in effect due to insufficient available state and Federal funds. There has been a continuing increase in total county health department budgets for the past eight years. This has been due almost entirely to increased local appropriations, since available state and Federal funds have remained almost static during this period. The total of county health department budgets has increased \$915,545 during the past eight years—from \$1,906,381 in 1948 to \$2,821,926 in 1956. The amount of this increase from 1955 to 1956 was \$259,036.

A complete revision of the Monthly Activities Report, the first revision in several years, was made during this year. This was done to enable county health departments to report their activities in the newer fields of public health, such as mental hygiene, cancer and heart disease.

A committee, composed of four representatives each from the State Departments of Health and Education, was appointed and began functioning with the objective of improving and coordinating school health services throughout the state.

PUBLIC HEALTH NURSING

Personnel.—Personnel, inadequate both in number and training, continued to be the number one problem of the Nursing Division. As usual, the turnover in nurses was high, transfer of nurses' husbands and pregnancy accounting for a large percentage. There were 37 appointments and 33 resignations. Jefferson County, which has the largest staff of nurses, had 13 resignations; Mobile County, three; Jackson and Tuscaloosa Counties had two each, and 13 counties had one resignation each. There were two new positions budgeted in the rural counties, one of which was still vacant at the end of the year.

As of December 31, 1956, the following nurses were on duty:

Local health departments.....	201
State Health Department.....	4
CCS (Education Department).....	10
Local education departments.....	9
Local Visiting Nurse Ass'ns.....	13
Voluntary agency (U. M. W.).....	1

Mrs. Mildred Jackson, Consultant Nurse, died early in the year and we have been unable to find a replacement for her.

Vacancies for county level positions in several instances had to be filled with nurses with no public health experience simply because they were local and available, even though we had some applications on file for more qualified nurses who were not available for counties in which vacancies occurred. This put an added burden of in-service education on the three consultants and the director and deprived other counties of needed help from the consultants.

Fifteen nurses were granted leaves of absence without pay for various reasons. Such temporary vacancies are difficult to fill, and, consequently, the counties in which they occurred had to go without full nursing service during these periods.

The majority of our nurses are married and have small children. We know that their efforts and loyalties are necessarily divided, therefore, and that such dependents contribute greatly to the sick leave these nurses have to take.

Two nurses were formally retired, and we are faced with the problem of having a few more who are reaching retirement age.

General.—A midwife manual was written and distributed to the more than 1,300 practicing midwives in Alabama. A midwife institute of three days' duration was held in Lee County, with "students" from two counties attending. The institute was conducted by the Lee County nurses, with one of the state consultants assisting.

The consultants assisted with regular midwife instruction throughout the state, especially where the nurses were new on the job. One county nurse gave the Red Cross Home Nursing Course to her group of midwives.

The one foreign visitor to our state this year was Miss Haydee Gomez, a graduate nurse-midwife from Costa Rica. She was with us three weeks observing our work with our "granny" midwives with a view to establishing a similar program in her country.

One of our consultant nurses is a member of the Board of Directors of the Maternal Welfare Association. Although most counties have spacing clinics, this activity is limited due to the fact that it is time-consuming and the crowded clinics allow little privacy. Only one county sets aside time for a separate clinic for this service.

The nurses rose valiantly to the occasion when the polio vaccination program interrupted their usual activities. Although our goals are far from achieved, it must be remembered that the public health nurses are, in the last analysis, to be credited with giving a large percentage of this vaccine.

Our nurses, both at state and county level, are active in nursing and educational affairs.

Education.—Early in the year, institutes were held on a district basis on the subject of immunity and immunization techniques. As a result of these institutes, together with the fact that adequate supplies and sterilizing equipment

were available for the first time in all counties, techniques have shown a tremendous improvement.

Nurses have continued to use the resources of the University of Alabama Nursing School, both on the campus and at the various extension centers. Ten nurses, by taking public health nursing subjects thus, have upgraded their classification under the Merit System this year. There have been other tangible results noted as an outcome of such study.

Through the generosity of the Alabama Mental Hygiene Association and the Division of Mental Hygiene, thirty-one nurses (public health and other) were given financial assistance to take a two weeks' concentrated course in mental hygiene. Local tuberculosis associations and the Division of Cancer Control financed several nurses for short courses at the University of North Carolina.

Due to the fact that traineeships under the Health Amendments Act were made available so late in the summer, only four nurses were able to take advantage of this plan. Three had a quarter's work and one a semester.

For the first time anywhere on a state-wide educational channel, the American Red Cross taught a course in home nursing over the Alabama Educational Television Network. Members of the state staff participated in the final lesson, and several county nurses conducted practice sessions for the students. A survey proved that only twenty-eight of our public health nurses are authorized instructors in Red Cross home nursing and comparatively little is being done along this line despite the fact that this is considered a civil defense activity.

Mrs. Gettine Kersh, Consultant Nurse in the Dothan area, taught two classes in public health nursing at the University Center there. This was the first time such courses had been available in that area.

The district group meetings, begun last year, continue to fill a need because of inadequacy of consultant and supervisory service. These meetings are held monthly and various subjects are discussed in line of in-service education as well as conducting necessary business of the organization.

MERIT SYSTEM

During 1956 the Merit System for County Health Work conducted competitive examinations on an open continuous basis for the following classes: Typist I, II, III, Clerk I and II, Public Health Veterinarian I, Sanitation Officer I, II, and III, Public Health Nurse I and II, and Psychiatric Social Worker. Several other examinations were open but no applications were received. Examinations for Psychiatric Social Worker, Sanitation Assistant, and Scientific Aide were closed during the year. The following new examinations were announced: Health Attendant, Custodial Worker, Domestic Worker, Sanitation Aide, Psychiatric Social Worker I and II, Clinical Psychologist I and II, and Health Officer I, II, and III. The number of applications received for the above examinations totaled 206, of

which 183 were acceptable. One hundred seventy-six appeared for the examinations. From this number 165 applicants made a passing grade, 11 failed, and 165 names were placed on the eligible registers. There were 90 appointments (including original appointments, reallocations, and appointments from non-status to status) made from these registers and six appointments from eligible lists previously established.

In addition to these, a total of 71 positions were filled on a provisional, temporary, emergency, or custodial basis. There were 105 separations from service which included 48 resignations, one lay-off, 41 expirations of provisional, temporary, or custodial appointments, two deaths, ten retirements, and three dismissals. The Merit System Council approved the following recommendations during 1956:

1. Revision in Section 4, Appointments to Unskilled and Custodial Positions, Rule VII, Certifications and Appointments, of the Rules and Regulations;
2. Increase in the maximum amount of annual leave to 30 days and the maximum amount of sick leave to 90 days. Deletion of the provision allowing bonus leave.
3. Addition to the Schedule of Basic Salary Ranges to allow for increased salary ranges.
4. Deletion of classifications and specifications for County Health Officer I, II, and III.
5. Adoption of new classes and salary ranges for:
 - A. Psychiatric Social Worker I,
 - B. Clinical Psychologist I and II,
 - C. Health Officer I, II, and III.
6. Changes in titles of specifications for:
 - A. Psychiatric Social Worker to Psychiatric Social Worker, II,
 - B. Assistant County Health Officer to Assistant Health Officer.

MATERNAL AND CHILD HEALTH

The Bureau of Maternal and Child Health has continued its efforts to improve health conditions for mothers and to reduce the maternal mortality rate for Alabama. It appears from provisional figures obtainable at this time that the maternal mortality rate for 1956 for Alabama will be substantially lower than ever before. A series of graph-charts was prepared and distributed to county health departments, officers of county medical societies and obstetricians, illustrating existing maternal mortality rates in the various counties. Health conditions for children have continued to be a primary project. Both our maternity and well baby clinics were well attended, as were our dental clinics.

This bureau continued to furnish funds for pertussis and triple vaccine immunization of children. The importance of children receiving the immunizing vaccines during the first year of life was reemphasized.

Routine work continued as a new director assumed duty the first of January. The bureau secretary transferred to another department and was replaced. A change in the nursing person-

nel was made. The consultant nurses of the bureau were transferred to the Division of Nursing. This change was made in an effort to keep the supervision of nurses under the Director of the Nursing Division. Efforts were continued to obtain the services of a dental director. The efforts were successful and a director was obtained. He assumed duty January 1, 1957.

Special emphasis was placed on determinations of anemia during the antenatal course, and a colorimetric method of hemoglobin determination was introduced to the various county health departments. Where county boards of health have permitted, iron tablets have been dispensed by the health departments for the treatment of anemia.

The copper sulfate method of measuring specific gravity of blood and plasma and conversion into hemoglobin level, which was instituted in the maternity clinics of nine counties, was discontinued as it was felt impracticable to be instituted on a statewide level.

Classes in preparation for childbearing were begun at the Montgomery County Health Department. These classes were taught by one of the nurses of that department, with one of the nurses formerly affiliated with this bureau as a consultant. Results from these classes have been most gratifying, and it is felt they are serving a very definite need. Plans to begin such classes in other parts of the state are underway.

The Midwife Manual was completed and distributed to all county health departments. The county health nurses have held classes for the midwives instructing them in the contents of this manual.

The bureau continued to work closely in conjunction with the Planned Parenthood League of Alabama.

Plans for a center for mentally retarded children were initiated. It is anticipated that this bureau will work jointly with the University of Alabama Medical School to obtain a special project grant from the Children's Bureau for the evaluation and treatment of mentally retarded children.

During 1956, 2,475 maternity clinics were conducted in 48 counties with 125 physicians participating, and 41,595 patient-visits to clinics. One thousand five hundred ninety-seven well baby clinics were held in 24 counties, 78 physicians participating and 195,420 patient visits to clinics.

The Macon County Maternity and Infant Care Program continued to provide much needed care for medically indigent, colored, abnormal maternity cases and premature or sick infants. There were 411 maternity patients and 269 pre-matures and sick infants under one year of age admitted through the Macon County Maternity and Infant Care Program for the year 1956. Four well qualified physicians served as teaching consultants at the John A. Andrew Memorial Hospital in connection with this program.

The Bureau of Maternal and Child Health in 1956 sponsored 1,249 dental clinic sessions in 28 counties, in which 103 clinicians participated, 10,103 patients were admitted, and 22,705 treatments rendered. An attempt was made to stimu-

late public appreciation of the importance of dental health care through an educational program. At the year's closing a total of three of our communities had been fluoridating their water supplies serving 65,182 people.

During the year, major emphasis centered around improving the nutrition of mothers and babies and preventing dietary diseases because the relative need in this area was indicated as most urgent.

The relation of food to the health and well-being of both mothers and babies was discussed at selected maternity clinics in the state. Limited income and odd eating habits of some of the population were considered in presenting food facts to groups and individuals.

Consultation and assistance were provided local health departments in an effort to strengthen their nutrition services which bear a close relationship to their total public health programs.

Visits were made to school lunchrooms, small hospitals, convalescent and nursing homes, and dietary procedures observed. Nutrition problems were discussed and suggestions made.

Guidance in nutrition was offered in crippled children's clinics which include treatment and rehabilitation of both children and adults with physical disabilities.

Nutrition material for general and specific distribution was prepared for expectant mothers, school children, teen-agers, the tuberculous, weight control group, the chronically ill and others with special dietary needs. Exhibits for window displays were assembled on request. Four workshops sponsored by various state agencies were held and participated in by the State Nutritionist.

LABORATORIES

The total number of laboratory specimens examined during the year was slightly less than the previous year. The number for 1956 was 488,591 compared to 514,939 for 1955. Specimens for intestinal parasites and bloods for syphilis serology accounted for most of the decrease. In general, there was little change in the number of most types of specimens received. The number of tuberculosis specimens did show a slight increase over the previous year. Totals were 38,282 for 1955 and 40,461 for 1956. The number of tuberculosis specimens cultured during 1956 was 21,265 as compared to 14,833 for the previous year. As cultures require far more time and expense than the examination of microscopic smears alone, the additional number of cultures done during the year represents a sizable increase in laboratory effort.

The routine inoculation of mice with specimen material from the brains and salivary glands of all animal heads examined for rabies was started in March 1956. Until that date, examination reports had been on microscopic smears. A total of 779 of these specimens from the Central Laboratory and from branch laboratories were inoculated into mice during the year. Of this number, 177 were positive and 602 negative by animal inoculation. Plans are to make the procedure

routine for all animal heads received in the laboratories.

All branch laboratories continued to function smoothly during the year. Considerable progress was made on the construction of new quarters for the laboratories in Tuscaloosa and in Mobile where new health center buildings are under construction. Both of these laboratories should be in new quarters early in 1957.

A system of cost accounting was inaugurated in the Central Laboratory at the beginning of 1956. Such a system was made possible by the quarters in the new building housing the Central Laboratory. All supplies used in the branch laboratories, as well as in the Central Laboratory, are issued from a central supply section in the new building. Accurate records were kept on all supplies issued to the divisions of the Central Laboratory as well as those issued to branch laboratories. Records for the first year do not reflect a true picture of supplies used due to the fact that they do not take into consideration supplies on hand in the branch laboratories at the beginning of the year. Records should reflect exact cost of each branch laboratory as well as divisions of the Central Laboratory after the first year of operation of the system.

The laboratories were not in position to take care of all demands for laboratory services. A public health laboratory must of necessity limit itself as to types of specimens examined as well as the types of procedures done on specimens. Demand for additional services that could not be undertaken with the present appropriations included sensitivity testing of tuberculosis cultures, mouth cultures in connection with oral hygiene programs, additional testing of dairy products samples and culture work in mycology.

The constant turnover of technical personnel continued to be a major problem in the administration of the laboratories. In some instances it necessitated the curtailment of some of the activities. If and when the budget allows, the hiring of a few additional people whenever they are available would perhaps ease the situation when experienced workers resign. More positions in the lower category are being filled since it is felt that these relatively untrained people can be fitted into routine procedures. The critical factor, however, has been and will continue to be obtaining qualified college graduates. This problem is not peculiar to the state laboratories alone but to all types of laboratories since so relatively few are being graduated from the colleges.

PREVENTABLE DISEASES

The communicable disease picture had the same familiar pattern as in previous years with those diseases that have immunizing agents, except in a few instances, showing a downward trend, and the others reflecting their epidemic or non-epidemic status.

The 103 cases of poliomyelitis reported were considerably less than that for the past nine years. Time will tell what effect the stepped-up inoculation program will have on the case load.

For diphtheria, there was a considerable drop in the number of cases reported, 114 as compared

to 311 cases for the previous year. In face of the excellent prophylaxis of diphtheria, the reported cases still remain too high, in spite of the fact that a good many of the counties intensified their immunization programs. If intensification, protection and education could be maintained, diphtheria would decline even more in the future.

Typhoid fever, with 32 cases reported, and paratyphoid with four cases reported, again reflect the effectiveness of continued anti-typhoid procedures. If education and vaccinations can be maintained typhoid fever will drop to lower levels in the future.

Infectious hepatitis continued its downward trend, aided and pushed by the gamma globulin program. There were 215 cases reported as compared to 310 cases for the previous year.

Three cases of malaria were reported, two domestic and one military, with the records revealing no laboratory findings. The military case was in a Korean veteran.

There were 4,562 cancer cases reported. Applications were received from 1,555 individuals desiring treatment through the State Tumor Clinic Service. Of this number, 1,274 were approved to receive treatment in one of the six State Tumor Clinics. Two hundred eighty-one were rejected for various reasons.

In the diagnostic clinics, 591 new cases of tuberculosis were found among the 47,955 individuals x-rayed. Since all films were read for both lung and heart pathology, 964 cases of heart disease and 172 cardiac suspects were found. In addition, 423 individuals with other lung pathology were found, including 317 suspected of cancer of the lung.

The mass x-ray program was carried to four counties, with 37,239 individuals x-rayed. Spot surveys were carried to 29 counties, with 34,364 individuals x-rayed. From a total of 71,603 individuals x-rayed, 381 new cases of tuberculosis were found and 2,390 suspects. Two hundred thirty-six cases of heart disease and 497 cardiac suspects were found. Twenty-seven were suspected of having tumors or cancerous conditions. Four hundred twenty-three were shown to have other pathology.

Spot blood test surveys for syphilis were carried on in 11 counties, with 4,955 individuals tested. Out of this group came 60 new cases of syphilis. From all sources, 1,495 cases of syphilis were reported, which is less than the previous year when 2,164 cases were found. Alabama, at the present time, is so close to the irreducible minimum that this figure will fluctuate from year to year, but the 1,495 cases of syphilis compare very favorably with 14,368 cases in 1946.

A Public Health Veterinarian was associated with the bureau for the entire year. Veterinary activities included: (1) routine investigation of human and animal cases of zoonotic diseases, especially rabies; (2) institution of an animal disease reporting system; and (3) participation in cooperative research projects with the Bureau of Laboratories and the U. S. Public Health Service Communicable Disease Center Virus and Rickettsia Laboratory.

SANITATION

PUBLIC WATER SUPPLIES

During 1956, the two engineers assigned to the Water Division continued to render all possible assistance to owners of public water supplies. After conferring with the consulting engineers and reviewing plans and specifications, the division issued permits for 40 major water works projects. The total estimated cost of these projects is approximately 5½ million dollars. A large number of these projects were due to normal expansion or growth of the municipal water systems, while some of this construction was due to the water shortages or near shortages during the last three years. Since additions to mains do not require permits, they are not included in the above cost.

Thirty-one of the above and 23 projects that were under construction at the first of the year, or a total of 54 projects, were completed and placed in service. These water supply facilities cost 5 9/10 million dollars and they materially aided the municipal supplies in preventing water shortages. When the facilities are completed, one of the two engineers usually visits the water works, instructs the operator, if necessary, and approves the construction.

At the end of the year, 18 projects were under construction. Some of these had just been started while others were practically completed. The cost of this work is approximately 7 million dollars. When these contracts are completed, all or almost all of the public supplies in Alabama should be in a position to meet the present and immediate future demands. There is, however, a possibility that unusual demands may be placed on certain supplies. In these cases, the engineers will attempt to promote improvements before they are needed.

To carry out the State Board of Health's responsibility in connection with water supply supervision, 260 water plants were visited once, 38 were visited twice, three were visited three times, one was visited four times and one was visited five times during the year, thus making a total of 354 visits. During these visits the general condition of the system, operating procedure, bacteriologic and chemical quality of the water are noted. At the time of the visit, operating personnel are given any necessary instructions in proper operational procedures, and responsible officials are conferred with regarding water works problems and needs. As a further control of quality, the engineers reviewed reports of bacteriologic analyses of 23,779 samples submitted to the Bureau of Laboratories. When interpretation of the reports indicated the need, instructions were given the water works personnel so that the situation causing the unsatisfactory sample could be corrected.

Three municipalities continue fluoridating their public water supplies. Several others gave consideration to the addition, and the subject continues to be much discussed.

The urgent need for additional personnel for water supply work continues. At the end of the year, prospects for securing an additional engineer to assist with the division's work were

bright. The number of semipublic and school water supplies serving many thousands of people but receiving little or no supervision from the State Health Department continued to increase rapidly. Phases of the work such as promotion of protected private water supplies had to be neglected due to lack of personnel.

The annual Short Course School for water and sewage works operators held at Auburn, Alabama, was outstanding. The school was attended by 158 people, and all were enthusiastic about the content of the course. This is one of the largest attendances since the school was started. Activities at the school assist the water works engineers in instructing operators and in promoting improvements to public supplies.

The Bureau of Sanitation, in addition, continues to assume responsibility for organizing and editing the Association's quarterly, the "Official Bulletin."

Water division engineers continued to cooperate with the U. S. Public Health Service in the program of certifying supplies for use by interstate carriers. They also aided in the training of new sanitation officer personnel.

GENERAL SANITATION

County health departments approved and reported to the Bureau of Sanitation 732 pit privies, 9,669 septic tanks and 5,647 sewer connections, or a total of 16,048 new units of sanitation. This sanitation serves a population of 71,844. A total of 1,404 sanitation units serving a population of 5,531 were restored to former usefulness and protection to the public health. It is thus seen that 77,375 people were benefited by the installation of 17,452 units of sanitation.

The Bureau of Sanitation continued to cooperate with the Department of Education in planning for and providing adequate sanitation for new schools. The number of schools on which assistance was given was considerably lower than the previous year. Personnel of the bureau gave technical assistance and actual field work on the design, layout and construction of these sewage disposal systems.

In cooperation with the Veterans Administration and Federal Housing Administration, 212 subdivisions were investigated by personnel of the Bureau, and the method of sewage disposal and water supply were approved to these agencies. The 212 subdivisions contain 5,926 acres and 9,935 home sites.

The bureau has also cooperated with the Alabama Military Department in securing proper and adequate sewage disposal for 30 new armories constructed or placed under construction in the state during 1956.

INSPECTION ACTIVITIES

Specific or implied responsibility for the construction, maintenance and operation of all food establishments and their immediate surroundings in which foods or beverages intended for human consumption are made, prepared, processed, displayed for sale and for the construction, maintenance and operation of hotels, inns, taverns, motels, tourist courts, tourist homes, and trailer

courts, as well as the construction, maintenance and operation of exhibition grounds, poultry slaughter houses, animal slaughter houses, dairy farms, receiving stations and processing plants, is placed in the Division of Inspection. Regulations governing construction, maintenance and operation of the various establishments listed above were developed as early as 1923 and have continued to be revised, taking into consideration the various scientific developments of public health significance.

"Regulations Governing the Construction, Equipment and Operation of Poultry Slaughter Houses and Processing Plants" were adopted by the State Board of Health January 13, 1954. "Regulations Governing the Production, Processing, Handling or Distribution of Milk and Certain Milk Products" were revised and adopted April 18, 1956. "Proposed Regulations Governing the Manufacture, Preparation, Display and Service of Foods, Confections and Beverages" have been revised for presentation during 1957. It is evident that the "Regulations Governing the Construction, Equipment and Operation of Slaughter Houses, Quick Freeze Locker Plants and Meat Processing Plants," adopted July 11, 1945, will require careful consideration, study and revision as well as enforcement during 1957.

At the present time there are approximately 20,000 establishments subject to the regulations. They require constant supervision and inspection. They include 89 pasteurization plants and receiving stations, 2,600 dairies, 183 ice cream manufacturing establishments, 14,000 food establishments, 112 slaughter houses, 86 carbonated beverage plants, 70 poultry processing plants, 14 crab meat packing plants, 42 oyster shucking plants, 167 hotels, 167 bakeries, 1,560 barber shops, 821 beauty shops and 181 tourist courts. Those establishments engaged in the preparation, processing, and handling of food and food products are dependent upon the application of the respective regulations to assure proper compliance and operation and to have an unrestricted market among counties and receiving states throughout the nation.

Sanitation personnel in 65 counties participate in many of these programs, in many instances without uniform application of the regulations from the state level. It is most confusing to the industry concerned as well as to the regulatory personnel involved to have numerous and varied interpretations of the regulations from one county to another.

The continued development, application and enforcement of regulations are dependent entirely upon the personnel available in this division and at the county level.

VECTOR CONTROL

During 1956, routine mosquito control operations were performed on major impoundages to approximately the same extent as in 1955. The Tennessee Valley Authority performed some aerial larviciding on four lakes in the state. This work has been minimized, however, by extensive permanent shore-line improvements. Airplane larviciding was done on two U. S. Engineer lakes with fairly satisfactory results and on Lake Martin with good results.

Minor impoundages continued to be constructed in large numbers. There were 9,849 on record at the end of the year.

Increased efforts were made to encourage and assist municipalities to improve those sanitary operations which are closely related to the production of flies, rats and mosquitoes. Generally cities were not encouraged to use pesticides on a large scale.

The Vector Control Demonstration Program in Gadsden which was established late in 1955 overcame some serious difficulties, and for the latter half of the summer of 1956 this project demonstrated dramatically the control of flies by means of basic sanitary measures and without the use of insecticides. It is not planned to start exploiting the demonstrational aspects of this program intensively until early 1957. It is then hoped that this project will serve to show municipal officials throughout the state the practicability of controlling disease vectors by basic sanitary methods.

Routine typhus control operations against rats and their ecto-parasites were slightly reduced in South Alabama counties. There is some evidence that rat populations are increasing in areas where these efforts have been relaxed. Local campaigns against rats, flies and mosquitoes using temporary effective methods have been carried on in a number of areas, but programs of this type have not been promoted strongly by this division.

DRAFTING

Routine assignments on maps, charts, graphs, posters and other illustrative material came into the Drafting Section from the various bureaus and divisions of the State Health Department and were completed as promptly as possible. Requests for drafting of various sorts were received from the county health departments. These requests were filled as quickly as possible.

All statistical charts were brought up to date or remade, as the need indicated. Charts, graphs and maps were made for the Annual Report and a considerable amount of time was spent in work on stencils.

Sanitary survey maps were brought up to date and new ones made as requested. A considerable volume of work was done for the Water Improvement Commission on charts, forms and reports in the assembling of data on sewage and industrial wastes.

Special work was done on material for exhibit purposes for the annual meeting of the Public Health Workers Conference in Birmingham.

A special magazine rack was purchased for the display of magazines and bulletins for the department. The installation of this piece of furniture has greatly facilitated the purposes of the technical library, putting all current magazines in convenient and immediate usage.

A total of 105 permanent tracings and drawings were made during the year.

VITAL STATISTICS ACTIVITIES

The year 1956 was a successful one for public health. The general mortality rate increased

slightly due to an ever-rising death toll from the chronic disease (heart diseases, cerebral, vascular and cancer) and accident fatalities. The rising trend of accident fatalities makes this one of the most serious problems of our state. Maternal and infant mortality was substantially reduced. For the second consecutive year, homicide mortality exceeded that of tuberculosis, but each was less than for the preceding year. Statistics quoted for 1956 are based upon provisional tabulations. Final figures will vary to some degree, but will remain approximately the same as these.

The Bureau of Vital Statistics received more than 173,000 pieces of mail concerning records and statistics. Fees amounting to \$48,895 were collected for certification services. A total of 102,329 certified copies was issued, including 4,539 gratuitous copies issued on request of the Veterans Administration. In 45,654 other cases, confirmations of record contents were made to prove age, citizenship, family relationship and many other purposes.

Original records numbering 132,724 were filed in 1956 for the following events: 83,224 live births, 26,909 deaths, 1,827 fetal deaths and 20,764 marriages. In addition, 10,761 reports of divorce and 41,528 reports of premarital physical examinations and blood tests were received. Certificates of adoption were prepared in 1,216 instances and 841 legitimation cases were completed. Record services involving adoptions and legitimations have increased steadily during the past decade. A total of 15,400 delayed certificates of birth was completed and recorded during 1956. This accomplishment accounts for a tremendous volume of clerical time and effort.

The Records Division handled 10,204 correction affidavits in 1956. A total of 3,671 queries (1,426 medical and 2,245 statistical) was mailed in an effort to complete and correct death certificates. Satisfactory responses were received in 3,099 cases. Special queries were made on 890 deaths reported as accident fatalities.

VITAL STATISTICS TRENDS

Deaths.—The general mortality figure of 26,896, which produced a rate of 8.2 per 1,000 population, was slightly higher in 1956 compared with the record low rate of 8.1 in 1955. When consideration is given to the increased average age of our adult population, a slight rise in mortality should be expected.

Infant Deaths.—Infant mortality was reduced substantially during the past year. A total of 2,578 babies less than one year old died at the rate of 31.0 per 1,000 live births, compared with a rate of 32.1 in 1955. The neonatal death rate dropped from 22.3 in 1955 to a record low of 20.7 in 1956. An increasing proportion of infant mortality is occurring within the first month of life. It is gratifying to note gradual and consistent reductions in mortality resulting from immaturity at birth.

Maternal Mortality.—Mortality ascribed to maternal causes decreased to a record low of 7.8 deaths per 10,000 deliveries. This means that the risk of death resulting from pregnancy and childbirth was reduced by more than 28 per cent in

1956. A total of 66 maternal mortalities (rate of 7.8 per 10,000 deliveries) was recorded, compared with 92 in 1955 at a rate of 11.0 per 10,000 deliveries. The average annual rate of maternal mortality covering the five year period 1950-1954 was 15.5 deaths per 10,000 deliveries. These figures denote great progress in promoting better maternal and infant health and overcoming the hazards of childbirth.

Fetal Deaths.—There was a slight reduction in the fetal death rate. A total of 1,827 fetal deaths was recorded at a rate of 21.5 per 10,000 as compared with 1,819 in 1955 with a rate of 21.8.

PRINCIPAL CAUSES OF DEATH

For the second consecutive year tuberculosis was not among the ten leading causes of death. Mortality from tuberculosis was reduced to a new low record in 1956. Congenital malformations displaced homicide to become the ninth leading cause of death. Diseases of the arteries displaced immaturity to become the sixth leading cause. Immaturity dropped to seventh place. The ten leading causes accounted for 77.9 per cent of all deaths during 1956. The five leading causes of death—heart diseases, vascular lesions, cancer, accidents and pneumonia—maintained their relative positions in the order named and accounted for more deaths than they caused in 1955.

Leading Causes of Death with	Rates Per 100,000 Population					
	1956		1955		1950-1954	
	Provisional		Final		Average	
	Number	Rate	Number	Rate	Number	Rate
Heart disease	8,864	270.7	8,533	263.4	8,156	260.0
Hypertension with heart, included above	1,736	53.0	1,749	54.0	2,077	66.2
Vascular lesions	3,521	107.5	3,428	105.8	3,309	105.5
Cancer	3,456	105.5	3,344	103.2	2,972	94.7
Accidents	2,026	61.9	1,889	58.3	1,893	60.3
Pneumonia	834	25.5	742	22.9	972	31.0
Diseases of the arteries	551	16.8	525	16.2	418	13.3
Immaturity	512	6.2**	587	7.2**	717	8.7**
Nephritis and nephrosis	485	14.8	508	15.7	672	21.4
Homicide	353	10.8	380	11.7	394	12.6
Congenital malformations	358	4.3**	365	4.5**	345	4.2**
Tuberculosis	330	10.1	349	10.8	611	19.5

**Death rate per 1,000 live births

Communicable Diseases

Communicable disease controls were effective in producing record new lows in mortality, with the exception of deaths from measles and scarlet

fever. Poliomyelitis mortality was only one-half that of 1955. The principal communicable diseases of childhood—diphtheria, whooping cough, measles and scarlet fever—have been reduced to a low rank as causes of death.

Deaths Attributed to Certain Communicable Diseases						
	1956		1955		1950-1954	
	Provisional		Final		Average	
	Number	Rate*	Number	Rate*	Number	Rate*
Influenza	127	3.9	180	5.6	281	9.0
Syphilis	61	1.9	72	2.2	123	3.9
Meningitis	12	0.4	24	0.7	33	1.0
Measles	12	0.4	2	0.1	19	0.6
Diphtheria	11	0.3	25	0.8	19	0.6
Whooping cough	10	0.3	23	0.7	26	0.8
Poliomyelitis	9	0.3	20	0.6	29	0.9
Encephalitis	5	0.2	6	0.2	7	0.2
Typhoid and paratyphoid	1	**	1	**	2	0.1
Scarlet fever	1	**	—	—	1	**
Erysipelas	—	—	3	0.1	2	0.1
Malaria	—	—	—	—	4	0.1

*Rate per 100,000 population
**Less than 0.05 percent

Births

In 1956, the number (83,244) of births recorded was the largest in several years (1951). The rate based upon the provisional tabulation and the estimated population is 25.4 births per 1,000 popu-

lation. The birth rate has remained at a high level, reaching a peak of 29 births per 1,000 population in 1947, and has remained around 26 to 27 births per 1,000 population. By comparison, in 1940 the rate was 22.2 which was only slightly

higher than low birth rates of the depression years.

Marriage and Divorce

Marriage and divorce registration increased. Totals of 20,764 marriages and 10,761 divorces were recorded. A current national report for 1956 discloses that only two states (West Virginia and Arkansas) of the 14 southeast and south central states recorded fewer marriages than Alabama. The report shows that Mississippi registered 65,926 marriages and 4,486 divorces. Some Alabama counties reported more divorces than marriages. Obviously many Alabama residents marry outside, but those who get a divorce are restricted to the state of their legal residence.

Part III of the Board's report was approved, as was the report as a whole.

REVISION OF THE ROLLS

The next order of business being the revision of the Rolls of the Association, the Secretary was directed by President Segrest to proceed without interruption in the absence of objection. As a preface to the revision of the Roll of County Societies, the Secretary said:

"County Medical Societies, to comply with the Constitution, must meet certain obligations. First, an annual report, on forms furnished by the Association, must be filed with the Secretary; second, each society is expected to be represented at the annual meeting by at least one delegate; and third, dues are to be remitted for each member not exempt from payment of dues."

With this foreword, the revision proceeded.

1. *Revision of the Roll of County Societies:*

(a) County societies which have fulfilled all their constitutional obligations: Autauga, Baldwin, Bibb, Bullock, Calhoun, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Coffee, Colbert, Conecuh, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Etowah, Franklin, Hale, Henry, Houston, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Madison, Marion, Mobile, Monroe, Montgomery, Morgan, Pickens, Pike, Randolph, Russell, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, and Wilcox. Total 51.

(b) County societies partially delinquent: In that they are not represented by delegates at this meeting of the Association—Barbour, Blount, Cleburne, Coosa, Fayette, Geneva, Jackson, Macon, Marshall, Perry, St. Clair, and Winston. Total 12.

(c) County societies totally delinquent: Butler, Greene, Lamar, and Marengo. Total 4.

No objection being made as to the correctness of this report, the President directed the Secretary to write the societies delinquent in report and dues and, failing to remove the delinquencies, to call the societies

to the attention of the State Board of Censors.

Whereupon the Roll of County Medical Societies was declared closed until the next annual session of the Association.

The Secretary then said:

"In revising the Roll of Counsellors, five lists are prepared, designated respectively: (1) the schedule of counsellors clear on the books; (2) the schedule of delinquent counsellors—counsellors delinquent in attendance or dues, or against whom charges may be pending; (3) the schedule of miscellaneous counsellors—counsellors who have died since the last annual meeting, or have offered their resignation, or have moved out of the state, or out of their respective congressional districts; (4) the schedule of active counsellors of twenty years' standing; and (5) the schedule of counsellors-elect who have qualified as provided in the Constitution."

With such preface, the revision of the rolls was continued.

2. *Revision of the Roll of Counsellors:*

(a) Counsellors clear on the books: Abbott, Allgood, Armstrong, Barnes, Barrett, Baumhauer, Belue, Bragg, Branch, Carraway, Chenault, Clyde, Cocke, Collier, Conwell, Crawford, Daves, Davis, J. W., and L. C., Denison, Dodson, Donald, D. C. and J. M., Finney, Foshee, Gibson, Gill, Gipson, Givhan, Glenn, Godard, Golden, Gray, Grote, Guest, Hill, Hollis, Holloway, Howell, Isbell, Jackson, Johnson, Jones, Kennedy, Killingsworth, Lisenby, Littlejohn, Lynch, Matthews, Mazyck, McCown, McNease, Moore, C. W. C., and E. G., Morgan, J. O., and Ralph, Moss, Neal, Newton, Nickerson, Owings, Parker, L. L. and Robert, Partlow, Riggs, Roan, Robinson, Samford, Segrest, Shell, Sherrill, Simpson, Smith, Snoddy, Spann, Stabler, Stallworth, Timberlake, Treherne, Underwood, Waters, Watson, Whiteside, Wheeler, Wilkerson, Wilson, F. C. and W. E., Woodruff, Woods.

In the absence of objection, the President ordered passed the names of these Counsellors reported as clear on the books.

(b) Delinquent Counsellors: None.

(c) Miscellaneous Counsellors:

(1) Life Counsellors who have died: Drs. W. A. Gresham, Seale Harris, J. P. Hayes, J. D. Perdue, and W. F. Scott.

(2) Active Counsellors who have died: Drs. C. T. Acker, W. J. Barber, and E. T. Brown.

(3) Active Counsellors who have moved: None.

(4) Active Counsellors who have resigned: Drs. J. Mac Bell, Frank Boyd, R. E. Cloud, and H. A. Darby.

(d) Active Counsellors of twenty years' standing: Drs. J. O. Belue, C. A. Grote, C. W. C. Moore, L. V. Stabler, and W. A. Stallworth.

(e) Counsellors-elect who have properly qualified: Drs. John L. Carmichael, Daniel R. Ramey, Jr., Robert W. Stallworth, and Sidney J. Williams.

The President directed that the names of the deceased Counsellors be transferred to the Book of the Dead; that Drs. J. O. Belue, C. A. Grote, C. W. C. Moore, L. V. Stabler, and W. A. Stallworth be transferred to the Roll of Life Counsellors; and that to the Roll of Active Counsellors there be added Drs. John L. Carmichael, Daniel R. Ramey, Jr., Robert W. Stallworth, and Sidney J. Williams.

He directed also that the names of Drs. J. Mac Bell, Frank Boyd, R. E. Cloud, and H. A. Darby be removed from the Roll of Active Counsellors.

Whereupon the Roll of Counsellors was declared closed until the next annual session of the Association.

3. Revision of the Roll of Correspondents:

Dr. Irvine H. Page, Cleveland, Ohio, who delivered the 1957 Jerome Cochran Lecture, was added to the Roll of Correspondents.

4. Revision of the Roll of Officers:

Dr. Edgar G. Givhan, Jr., Birmingham, was chosen President-elect, Dr. E. L. Strandell, Brewton, Vice-President of the Southwestern Division for a term of four years; Dr. G. O. Segrest, Mobile, Censor for two years to fill the unexpired term of Dr. J. D. Perdue, deceased; and Drs. Robert Parker, Montgomery, and J. P. Collier, Tuscaloosa, Censors for five years.

Committees constitutionally provided to nominate Counsellors brought in the following nominations, and the nominees were elected by the Association: 1st District—M. Vaun Adams, J. H. Little, J. Paul Jones, and W. W. Eddins; 2nd District—J. O. Lisenby, Frank Riggs, and Luther L. Hill; 3rd District—B. F. Thomas, Sr.; 4th District—R. P. Stock; 5th District—J. M. Crawford; 6th District—L. H. Hubbard, R. C. Partlow, A. F. Wilkerson; 7th District—G. T. Rowe; 8th District—J. S. Crutcher, Jr., N. E. Cowart, A. D. Powers; 9th District—G. A. Denison, Hughes Kennedy, Jr., Garber Galbraith.

The following resolution introduced by Dr. Julius Michaelson was unanimously adopted:

RESOLUTION OF APPRECIATION

Whereas, The 1957 annual session of the Medical Association of the State of Alabama has been very successful both scientifically and socially, and

Whereas, The members of this Association are deeply indebted to those responsible for the success of this endeavor, and

Whereas, The generous and unstinting efforts of the members of the Mobile County Medical Society have added many pleasant features to this annual session, now, therefore, be it

Resolved, That the House of Delegates and College of Counsellors, sitting in executive session as the governing body of the Medical Association of the State of Alabama, express its profound appreciation and commendation to:

1. The Mobile County Medical Society, its

President, Dr. Arthur A. Wood, and its several committees for their efforts in making our stay in Mobile so pleasant;

2. The staff of the Admiral Semmes Hotel and the Mobile Country Club for their many courtesies;

3. The newspapers, and radio and T. V. stations for their outstanding coverage of this meeting;

4. The exhibitors for their continued support and assistance; and

5. All others who have had a part in adding to our comfort, knowledge, and entertainment, and be it further

Resolved, That a copy of this resolution be sent to the President of the Mobile County Medical Society.

Meeting of 1958

On behalf of the Montgomery County Medical Society, its President, Dr. Philip Burwell, invited the Association to hold its 1958 meeting in Montgomery. The invitation was accepted.

Installation of Officers

President-elect John A. Martin was installed as President, and in accepting the gavel, presented the retiring President, Dr. Segrest, his past-president's pin. Dr. Martin then installed his fellow officers.

There being no further business to claim the attention of the Association, the meeting was declared adjourned.

THE ROLL OF COUNSELLORS REVISION OF 1957 LIFE COUNSELLORS

Name and Address	Date of Election
Alison, James F., Selma (4)	1934
Alison, Samuel Beekman, Minter (4)	1919
Anderson, Thos. J., Greensboro (6)	1933
Ashcraft, Virgil Lee, Reform (7)	1919
Bedsole, James G., Jackson (1)	1922
Belue, Julius O., (8)	1937
Brunson, Emmett T., Samson (3)	1936
Burdshaw, Shelby L., Headland (3)	1921
Caldwell, Edwin Valdivia, Huntsville (8)	1918
Cannon, Douglas L., Montgomery (2)	1928
Carter, William R., Repton (2)	1934
Chenault, Erskine M., Decatur (8)	1935
Chenault, Frank L., Decatur (8)	1917
Craddock, French H., Sylacauga (4)	1932
Dabney, Marye Y., Birmingham (9)	1923
Eskew, M. H., Uniontown (6)	1934
Garber, James R., Birmingham (9)	1932
Granger, Frank G., Ashford (3)	1928
Gresham, George L., Opp (2)	1913
Grote, Carl A., Huntsville (8)	1937
Hayes, Charles Phillips, Elba (3)	1920
Heacock, Jos. D., Birmingham (9)	1912
Heflin, Wyatt, Birmingham (9)	1893
Hill, Robert C., York (6)	1936
Hill, Robert L., Winfield (7)	1924
Hodges, Rayford, Scottsboro (8)	1935
Howell, William Edward, Haleyville (7)	1918
Howle, James Augustus, Hartselle (8)	1895
Hubbard, T. Brannon, Montgomery (2)	1924
Jackson, Alva A., Florence (8)	1918
Lester, Belford S., Birmingham (9)	1923
Lull, Cabot, Birmingham (9)	1919

Martin, John A., Montgomery (2)	1933
McAdory, Edward Dudley, Cullman (7)	1920
McLeod, John Calvin, Bay Minette (2)	1911
Moore, C. W. C., Talladega (4)	1937
Oswalt, G. G., Mobile (1)	1929
Parker, Lorenzo D., Andalusia (2)	1933
Ralls, Arthur W., Gadsden (5)	1919
Riser, William H., Lafayette (5)	1935
Rucker, Edmon W., Birmingham (9)	1922
Salter, Wilburn M., Anniston (4)	1934
Sankey, Howard J., Birmingham (9)	1914
Searcy, Harvey Brown, Tuscaloosa (6)	1923
Smith, Gordon R., Ozark (3)	1934
Stabler, L. V., Greenville (2)	1937
Stallworth, W. A., Beatrice (1)	1937
Taylor, Woodie R., Town Creek (8)	1926
Thacker, Vincent J., Dothan (3)	1935
Thigpen, Charles Alston, Montgomery (2)	1900
Walls, J. J., Alexander City (5)	1924
Weldon, Joseph M., Mobile (1)	1935
Wilkinson, David Leonidas, Tuscaloosa (6)	1902
Total 53	

ACTIVE COUNSELLORS

Those marked with a † are serving last terms of six years.

Those marked with an asterisk (*) are serving second terms of seven years.

Those without a symbol are serving first terms of seven years.

The numeral is the number of the congressional district.

	Date of Elec- Expi- tion ration
Abbott, Chas. E., Tuscaloosa (6)	†1952 to 1958
Allgood, Homer W., Fairfield (9)	*1951 to 1958
Armstrong, James H., Selma (4)	1954 to 1961
Barnes, J. Mac Ilwaine, Montgomery (2)	*1956 to 1963
Barrett, Maurice E., Decatur (8)	1955 to 1962
Baumhauer, Jacques H., Mobile (1)	*1956 to 1963
Bragg, John C., Decatur (8)	†1955 to 1961
Branch, John L., Montgomery (2)	*1951 to 1958
Carmichael, John L., Birmingham (9)	1956 to 1963
Carraway, Chas. Newton, Birmingham (9)	†1956 to 1962
Chenault, John M., Decatur (8)	1954 to 1961
Clyde, Wallace A., Birmingham (9)	*1954 to 1961
Cocke, William T., Jefferson (1)	†1953 to 1959
Collier, James P., Tuscaloosa (6)	†1954 to 1960
Conwell, H. Earle, Birmingham (9)	†1956 to 1962
Crawford, Jas. M., Arab (5)	*1957 to 1964
Daves, James G., Cullman (7)	†1952 to 1958
Davis, John W., Jr., Montgomery (2)	1954 to 1961
Davis, Lewis C., Gordo (7)	†1953 to 1959
Denison, George A., Birmingham (9)	†1957 to 1963
Dodson, Robert B., Cullman (7)	*1951 to 1958
Donald, Dan C., Birmingham (9)	*1951 to 1958
Donald, Joseph M., Birmingham (9)	*1953 to 1960
Finney, James O., Gadsden (5)	*1954 to 1961
Foshee, Reuben A., Alexander City, Rt. 4 (5)	*1951 to 1958
Gibson, Edward Lee, Enterprise (3)	†1954 to 1960
Gill, Daniel G., Montgomery (2)	*1954 to 1961
Gipson, Amos C., Gadsden (5)	*1951 to 1958
Givhan, Edgar G., Jr., Birmingham (9)	*1953 to 1960
Glenn, E. Byron, Birmingham (9)	1955 to 1962
Godard, Claud G., Fairhope (2)	†1956 to 1962
Golden, William C., Clanton (6)	*1951 to 1958
Gray, Hugh E., Anniston (4)	1954 to 1961
Guest, Reuben J., Jr., Ft. Payne (5)	1953 to 1960
Hill, R. Lee, Haleyville (7)	†1953 to 1959
Hollis, Murray C., Winfield (7)	1951 to 1958
Holloway, H. Sellers, Notasulga (3)	1951 to 1958
Howell, Julian P., Selma (4)	1954 to 1961
Isbell, Arthur L., Albertville (5)	†1954 to 1960
Jackson, Albert C., Jasper (7)	†1954 to 1960
Johnson, Gayle T., Mobile (1)	1953 to 1960
Jones, J. Paul, Camden (1)	†1957 to 1963
Kennedy, Hughes, Jr., Birmingham (9)	†1957 to 1963
Killingsworth, Noah W., Brundidge (2)	†1953 to 1959

Lisenby, J. Otis, Atmore (2)	†1957 to 1963
Littlejohn, Wilmot S., Birmingham (9)	*1955 to 1962
Lynch, M. H., Scottsboro (8)	1955 to 1962
Matthews, Augustus D., Ozark (3)	1954 to 1961
Mazyck, Arthur, Dothan (3)	*1955 to 1962
McCown, William G., Huntsville (8)	*1954 to 1961
McNease, Benjamin W., Fayette (7)	*1954 to 1961
Moore, Ernest G., Tallassee (4)	1954 to 1961
Morgan, J. Orville, Gadsden (5)	†1953 to 1959
Morgan, J. Ralph, Geneva (3)	*1956 to 1958
Moss, John E., Mobile (1)	1955 to 1962
Neal, Ralph D., Grove Hill (1)	*1955 to 1962
Newton, George E., Prattville (4)	1953 to 1960
Nickerson, Paul, Sylacauga (4)	1954 to 1961
Owings, W. J. B., Brent (6)	†1955 to 1961
Parker, Leslie L., Andalusia (2)	1953 to 1960
Parker, Robert, Montgomery (2)	*1955 to 1962
Partlow, Rufus C., Tuscaloosa (6)	†1957 to 1963
Ramey, Daniel R., Jr., Greensboro (6)	1956 to 1963
Riggs, Frank W., Montgomery (2)	†1957 to 1963
Roan, Avery M., Decatur (8)	†1955 to 1961
Robinson, E. Bryce, Fairfield (9)	*1955 to 1962
Samford, Millard W., Opelika (3)	*1953 to 1960
Segrest, Grady O., Mobile (1)	†1956 to 1962
Shell, James R., Abbeville (3)	1954 to 1961
Sherrill, John D., Birmingham (9)	†1953 to 1959
Simpson, John W., Birmingham (9)	†1956 to 1962
Smith, J. Donald, Eutaw (6)	1953 to 1960
Snoddy, William T., Jasper (7)	1955 to 1962
Spann, Chas. L., Dothan (3)	1955 to 1962
Stallworth, Robert W., Evergreen (2)	1956 to 1963
Timberlake, Landon, Birmingham (9)	1952 to 1959
Treherne, Alfred J., Atmore (2)	1953 to 1960
Underwood, S. Sellers, Birmingham (9)	*1956 to 1963
Waters, Hinton W., Opp (2)	†1953 to 1959
Watson, Jerre, Anniston (4)	†1952 to 1958
Wheeler, N. A., Jr., Lafayette (5)	1955 to 1962
Whiteside, Maurice S., Cullman (7)	†1955 to 1962
Wilkerson, Arthur F., Marion (6)	*1957 to 1964
Williams, Sidney J., Livingston (6)	1956 to 1963
Wilson, Frank C., Birmingham (9)	†1956 to 1962
Wilson, William E., Russellville (7)	1953 to 1960
Woodruff, Gerald G., Anniston (4)	†1954 to 1960
Woods, Thomas B., Dothan (3)	1954 to 1961
Total 88	

COUNSELLORS-ELECT

Adams, M. Vaun, Mobile (1)	1957 to 1964
Cowart, Norton E., Huntsville (8)	1957 to 1964
Crutcher, John S., Jr., Athens (8)	1957 to 1964
Eddins, Woodrow W., Monroeville (1)	1957 to 1964
Galbraith, J. Garber, Birmingham (9)	1957 to 1964
Hill, Luther L., Jr., Montgomery (2)	1957 to 1964
Hubbard, Leslie H., Montevallo (6)	1957 to 1964
Little, Joe H., Mobile (1)	1957 to 1964
Powers, Alvin D., Athens (8)	1957 to 1964
Rowe, George T., Cullman (7)	1957 to 1964
Stock, Robert P., Childersburg (4)	1957 to 1964
Thomas, Benjamin F., Sr., Auburn (3)	1957 to 1964
Total 12	

THE ROLL OF THE COLLEGE OF COUNSELLORS BY CONGRESSIONAL DISTRICTS

On this roll the names of the Counsellors are given by Congressional Districts. It is intended to serve as a guide in the election of new Counsellors, with a view to the distribution of them in approximate proportion to the number of members in the several districts. It is not considered to be good policy, and it is not considered to be fair and right, to give a few large towns greatly more than their pro rata share of Counsellors. The calculations are based on the nearest whole number. On April 1, 1957, there were 2025 members in the County Medical Societies. That would give one Counsellor to every 20 members. The membership set forth in the following is that of April 1.

FIRST DISTRICT

Names of Counsellors—W. T. Cocke, Marengo; R. D. Neal, Clarke; J. H. Baumhauer, G. O. Segrest, J. E. Moss, Gayle T. Johnson, M. Vaun Adams and J. H. Little, Mobile; W. W. Eddins, Monroe; J. Paul Jones, Wilcox.

County	Members	Counsellors
Choctaw	7	0
Clarke	11	1
Marengo	11	1
Mobile	215	6
Monroe	7	1
Washington	5	0
Wilcox	9	1
	265	10

SECOND DISTRICT

Names of Counsellors—C. G. Godard, Baldwin; R. W. Stallworth, Conecuh; L. L. Parker and H. W. Waters, Covington; J. O. Lisenby and A. J. Treherne, Escambia; J. L. Branch, F. W. Riggs, J. M. Barnes, Robert Parker, D. G. Gill, J. W. Davis, Jr., and L. L. Hill, Jr., Montgomery; N. W. Killingsworth, Pike.

County	Members	Counsellors
Baldwin	25	1
Butler	12	0
Conecuh	8	1
Covington	24	2
Crenshaw	8	0
Escambia	18	2
Lowndes	4	0
Montgomery	151	7
Pike	15	1
	265	14

THIRD DISTRICT

Names of Counsellors—E. L. Gibson, Coffee; A. D. Matthews, Dale; J. Ralph Morgan, Geneva; J. R. Shell, Henry; C. L. Spann, Arthur Mazyck, and T. B. Woods, Houston; B. F. Thomas, Sr., and M. W. Samford, Lee; H. S. Holloway, Macon.

County	Members	Counsellors
Barbour	12	0
Bullock	4	0
Coffee	10	1
Dale	11	1
Geneva	14	1
Henry	5	1
Houston	36	3
Lee	20	2
Macon	5	1
Russell	5	0
	122	10

FOURTH DISTRICT

Names of Counsellors—G. E. Newton, Autauga; Hugh E. Gray, Jerre Watson and G. G. Woodruff, Calhoun; J. H. Armstrong and J. P. Howell, Dallas; E. G. Moore, Elmore; R. P. Stock and Paul Nickerson, Talladega.

County	Members	Counsellors
Autauga	6	1
Calhoun	50	3

Clay	4	0
Coosa	3	0
Dallas	32	2
Elmore	10	1
St. Clair	9	0
Talladega	33	2
	147	9

FIFTH DISTRICT

Names of Counsellors—N. A. Wheeler, Jr., Chambers; R. J. Guest, Jr., DeKalb; A. C. Gipson, J. O. Finney and J. O. Morgan, Etowah; A. L. Isbell and J. M. Crawford, Marshall; R. A. Foshee, Tallapoosa.

County	Members	Counsellors
Chambers	19	1
Cherokee	3	0
Cleburne	3	0
DeKalb	13	1
Etowah	71	3
Marshall	25	2
Randolph	14	0
Tallapoosa	18	1
	166	8

SIXTH DISTRICT

Names of Counsellors—W. J. B. Owings, Bibb; W. C. Golden, Chilton; J. Donald Smith, Greene; D. R. Ramey, Jr., Hale; A. F. Wilkerson, Perry; L. H. Hubbard, Shelby; S. J. Williams, Sumter; J. P. Collier, R. C. Partlow and C. E. Abbott, Tuscaloosa.

County	Members	Counsellors
Bibb	4	1
Chilton	10	1
Greene	2	1
Hale	7	1
Perry	8	1
Shelby	14	1
Sumter	9	1
Tuscaloosa	75	3
	129	10

SEVENTH DISTRICT

Names of Counsellors—Geo. T. Rowe, R. B. Dodson, J. G. Daves and M. S. Whiteside, Cullman; B. W. McNease, Fayette; W. E. Wilson, Franklin; M. C. Hollis, Marion; L. C. Davis, Pickens; A. C. Jackson and W. T. Snoddy, Jr., Walker; R. Lee Hill, Winston.

County	Members	Counsellors
Blount	9	0
Cullman	23	4
Fayette	8	1
Franklin	17	1
Lamar	8	0
Marion	12	1
Pickens	11	1
Walker	28	2
Winston	10	1
	126	11

EIGHTH DISTRICT

Names of Counsellors—M. H. Lynch, Jackson; J. S. Crutcher, Jr. and A. D. Powers, Lime-

stone; W. G. McCown and N. E. Cowart, Madison; M. M. Barrett, J. C. Bragg, A. M. Roan, and J. M. Chenault, Morgan.

County	Members	Counsellors
Colbert	22	0
Jackson	11	1
Lauderdale	44	0
Lawrence	7	0
Limestone	13	2
Madison	43	2
Morgan	40	4
	180	9

NINTH DISTRICT

Names of Counsellors—J. D. Sherrill, C. N. Carraway, H. Earle Conwell, J. W. Simpson, F. C. Wilson, G. A. Denison, Hughes Kennedy, Jr., E. B. Glenn, D. C. Donald, Joe M. Donald, E. G. Givhan, Jr., H. W. Allgood, W. A. Clyde, E. Bryce Robinson, W. S. Littlejohn, S. S. Underwood, Landon Timberlake, J. L. Carmichael, and Garber Galbraith.

County	Members	Counsellors
Jefferson	625	19

THE ROLL OF CORRESPONDENTS

"Distinguished members of the medical profession residing outside of the State, and Counsellors of the Association, who after not less than ten years of faithful service may have resigned their counsellorships, shall be eligible for election as Correspondents.

"Correspondents shall have the privilege of transmitting or presenting to the Association such communications, or scientific essays, as they may deem proper."—*From the Constitution.*

<i>Name and Address</i>	<i>Date of Election</i>
Andrew J. Coley, Oklahoma City	1909
Rudolph Matas, New Orleans	1921
Henry A. Christian, Boston	1921
H. A. Royster, Raleigh, N. C.	1926
G. Canby Robinson, Baltimore	1928
Russell L. Cecil, New York	1934
T. M. McMillan, Philadelphia	1938
George T. Pack, New York	1939
E. V. McCollum, Baltimore	1940
Harvey B. Stone, Baltimore	1942
Albert C. Furstenberg, Ann Arbor	1943
Alton Ochsner, New Orleans	1946
Reginald Fitz, Boston	1947
Andrew C. Ivy, Chicago	1948
Max Thorek, Chicago	1949
Paul D. White, Boston	1950
Emil Novak, Baltimore	1951
Richard Cattell, Boston	1952
Claude S. Beck, Cleveland	1954
Charles W. Mayo, Rochester, Minn.	1955
John B. Youmans, Nashville	1956
Irvine H. Page, Cleveland, Ohio	1957

SCHEDULE OF THE ANNUAL SESSIONS
AND PRESIDENTS SINCE THE RE-
ORGANIZATION IN 1868

<i>Place and President</i>	<i>Year</i>
Selma—Albert Galatin Mabry	1868

Mobile—Albert Galatin Mabry	1869
Montgomery—Richard Frazer Michel	1870
Mobile—Francis Armstrong Ross	1871
Huntsville—Thomas Childress Osborne	1872
Tuscaloosa—George Ernest Kumpe	1873
Selma—George Augustus Ketchum	1874
Montgomery—Job Sobieski Weatherly	1875
Mobile—John Jefferson Dement	1876
Birmingham—Edward Davies McDaniel	1877
Eufaula—Peter Bryce	1878
Selma—Robert Dickens Webb	1879
Huntsville—Edmond Pendleton Gaines	1880
Montgomery—William Henry Anderson	1881
Mobile—John Brown Gaston	1882
Birmingham—Clifford Daniel Parke	1883
Selma—Mortimer Harvey Jordan	1884
Greenville—Benjamin Hogan Riggs	1885
Anniston—Francis Marion Peterson	1886
Tuscaloosa—Samuel Dibble Seelye	1887
Montgomery—Edward Henry Sholl	1888
Mobile—Milton Columbus Baldrige	1889
Birmingham—Charles Higgs Franklin	1890
Huntsville—William Henry Sanders	1891
Montgomery—Benjamin James Baldwin	1892
Selma—James Thomas Searcy	1893
Birmingham—Thaddeus Lindley Robertson	1894
Mobile—Richard Matthew Fletcher	1895
Montgomery—William Henry Johnston	1896
Selma—Barckley Wallace Toole	1897
Birmingham—Luther Leonidas Hill	1898
Mobile—Henry Altamont Moody	1899
Montgomery—John Clarke LeGrande	1900
Selma—Russell McWhorter Cunningham	1901
Birmingham—Edwin Lesley Marechal	1902
Talladega—Glenn Andrews	1903
Mobile—Matthew Bunyan Cameron	1904
Montgomery—Capers Capehart Jones	1905
Birmingham—Eugene DuBose Bondurant	1906
Mobile—George Tighlman McWhorter	1907
Montgomery—Samuel Wallace Welch	1908
Birmingham—Benjamin Leon Wyman	1909
Mobile—Wooten Moore Wilkerson	1910
Montgomery—Wyatt Heflin Blake	1911
Birmingham—Lewis Coleman Morris	1912
Mobile—Harry Tutwiler Inge	1913
Montgomery—Robert S. Hill	1914
Birmingham—Benjamin Britt Simms	1915
Mobile—James Norment Baker	1916
Montgomery—Henry Green	1917
Birmingham—William Dempsey Partlow	1918
Mobile—Isaac LaFayette Watkins	1919
Anniston—James Somerville McLester	1920
Montgomery—Louis William Johnston	1921
Birmingham—Dyer F. Talley	1922
Mobile—Walter S. Britt	1923
Montgomery—W. W. Harper	1924
Birmingham—J. D. Heacock	1925
Mobile—C. A. Mohr	1926
Montgomery—A. L. Harlan	1927
Birmingham—John D. S. Davis	1928
Mobile—E. V. Caldwell	1929
Montgomery—L. E. Broughton	1930
Birmingham—W. G. Harrison	1931
Mobile—Toulmin Gaines	1932
Montgomery—Samuel Kirkpatrick	1933
Birmingham—James R. Garber	1934
Mobile—William M. Cunningham	1935
Montgomery—Charles A. Thigpen	1936
Birmingham—Lloyd Noland	1937
Mobile—E. S. Sledge	1938

Montgomery—Seale Harris, Sr.	1939
Birmingham—M. S. Davie	1940
Mobile—Samuel A. Gordon	1941
Montgomery—James M. Mason	1942
Birmingham—Harvey B. Searcy	1943
Montgomery—Fred W. Wilkerson	1944
Meeting Cancelled—Walter F. Scott	1945
Birmingham—Walter F. Scott	1946
Birmingham—Carl A. Grote	1947
Mobile—Jesse P. Chapman	1948
Montgomery—J. Paul Jones	1949
Birmingham—Frank C. Wilson	1950
Mobile—Joseph M. Weldon	1951
Montgomery—T. Brannon Hubbard	1952
Birmingham—B. W. McNease	1953
Mobile—J. Orville Morgan	1954
Montgomery—Joseph M. Donald	1955
Birmingham—Frank L. Chenault	1956
Mobile—Grady O. Segrest	1957

SECRETARIES OF THE ASSOCIATION

1852-1854	George A. Ketchum
1854-1855	R. Miller
1869-1873	Jerome Cochran
1874-1876	B. H. Riggs
1879-1892	T. A. Means
1893-1897	J. R. Jordan
1897-1904	G. P. Waller
1904-1906	L. C. Morris
1906-1915	J. N. Baker
1915-1923	H. G. Perry
1923-1924	Douglas L. Cannon
1924-1930	B. B. Simms
1930-1940	Douglas L. Cannon

TREASURERS OF THE ASSOCIATION

1854-1855	W. P. Reese
1869-1898	W. C. Jackson
1898-1915	H. G. Perry
1915-1939	J. U. Ray

SECRETARY-TREASURERS OF THE ASSOCIATION

1940-	Douglas L. Cannon
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SCHEDULE OF JEROME COCHRAN LECTURERS

1899—J. T. Searcy, Tuscaloosa—What Is Insanity?
1900—Wm. Osler, Baltimore—Not present.
1901—Wm. Osler, Baltimore—Not present.
1902—Nathan Bozeman, New York—Declined.
1903—George H. Price, Nashville—The History of Medicine.
1904—W. S. Thayer, Baltimore—Cardiac and Vascular Complications of Typhoid Fever.
1905—Robert Abbe, New York—The Problems of Surgery.
1906—Joseph Collins, New York—Arteriosclerosis.
1907—Nicholas Senn, Chicago—Final Triumph of Scientific Medicine.
1908—E. L. Marechal, Mobile—Absent.
1909—Lewellys F. Barker, Baltimore—Clinical Methods of Cardiac Investigation.
1910—Frank S. Meara, New York—Some Problems of Nutrition in Early Life.

1911—Rudolph Matas, New Orleans—Inflammatory Tuberculosis.
1912—Maurice H. Richardson, Boston—Elimination of Preventable Disasters from Surgery.
1913—L. L. Hill, Montgomery—Surgical Complications and Sequelae of Typhoid Fever.
1914—Frank Smithies, Chicago—Contributions of the Twentieth Century to the Better Understanding of Gastric Cancer.
1915—John B. Elliott, Jr., New Orleans—Abscess of Liver.
1916—Howard A. Kelly, Baltimore—Radium Therapy.
1917—Wm. J. Mayo, Rochester—Importance of Septic Infection in the Three Great Plagues.
1918—George E. Bushnell, Washington—The Army in Relation to the Tuberculosis Problem.
1919—George W. Crile, Cleveland, Ohio—Abdominal Surgery in Civil and Military Hospitals.
1920—Henry A. Christian, Boston—Bright's Disease With Special Reference to Its Treatment.
1921—J. Whitridge Williams, Baltimore—A Critical Review of Twenty-One Years' Experience with Caesarean Section.
1922—Chas. H. Mayo, Rochester, Minn.—The Thyroid and Its Diseases.
1923—Jas. S. McLester, Birmingham—Nutrition in Its Newer Aspects.
1924—James S. Stone, Boston—Abdominal Diagnoses in Children.
1925—H. A. Royster, Raleigh—The Surgeon's Heritage and Outlook.
1926—Stewart Roberts, Atlanta—The Heart Muscle.
1927—G. Canby Robinson, Baltimore—The Mechanism of Heart Failure and Its Correction.
1928—John B. Deaver, Philadelphia—Chronic Pancreatitis.
1929—Louis B. Wilson, Rochester, Minn.—Some Suggestions for Improved Training of Medical Specialists.
1930—Walter E. Sistrunk, Dallas, Texas—The Part That Surgical Anesthesia Has Played in Medical Science.
1931—R. S. Cunningham, Nashville, Tenn.—Studies on the Pathology of Tuberculosis and Syphilis.
1932—A. Benson Cannon, New York—Practical Points on the Diagnosis and Treatment of the so-called Lymphoblastoma Group of Diseases.
1933—J. Shelton Horsley, Richmond—Cancer of the Stomach and Colon.
1934—Russell L. Cecil, New York—Present Trends in the Study of Rheumatic Fever and Rheumatoid Arthritis.
1935—George H. Semken, New York—A Consideration of Tumors of the Breast.
1936—William D. Partlow, Tuscaloosa—A Debt the World Owes Medical Science.
1937—Frank H. Lahey, Boston—Carcinoma of the Colon and Rectum.
1938—T. M. McMillan, Philadelphia—An Optimistic View of Some of the Problems of Heart Disease.
1939—George T. Pack, New York—Recent Advances in the Radiation Therapy of Cancer.
1940—E. V. McCollum, Baltimore—Some Contributions of Nutritional Research to Clinical Medicine.

1941—M. Y. Dabney, Birmingham—The Story of Breast Cancer.

1942—Harvey B. Stone, Baltimore—Biliary Diseases as Seen by a Surgeon.

1943—A. C. Furstenberg, Ann Arbor—Objectives in Medical Education.

1944—Tinsley R. Harrison, Dallas, Texas—The Value and Limitations of Laboratory Tests in the Practice of Medicine.

1945—Meeting Cancelled.

1946—Alton Ochsner, New Orleans—The Influence of Serendipity on Medicine.

1947—Reginald Fitz, Boston—The Early Characteristics of Certain Chronic Diseases.

1948—Andrew C. Ivy, Chicago—The Gallbladder in Health and Disease.

1949—Max Thorek, Chicago—Cholecystectomy: Its Technical Variations.

1950—Paul D. White, Boston—Historical Delays in the Application of Knowledge About the Heart.

1951—Emil Novak, Baltimore—The Relation of Hormones to Female Genital Tumors.

1952—Richard Cattell, Boston—Carcinoma of the Colon and Rectum.

1953—Champ Lyons, Birmingham—Metabolic Aspects of Convalescence.

1954—Claude S. Beck, Cleveland—Operations for Coronary Disease.

1955—Charles W. Mayo, Rochester, Minn.—The Role of Medicine and Doctors in International Relations.

1956—John B. Youmans, Nashville—The Chronic Toxicity of Salt (Sodium Chloride).

1957—Irvine H. Page, Cleveland—The Treatment of Arterial Hypertension.

OFFICERS OF THE ASSOCIATION

PRESIDENT

John A. Martin (1958)..... Montgomery

PRESIDENT-ELECT

Edgar G. Givhan, Jr., (1959)..... Birmingham

VICE-PRESIDENTS

Hugh Gray (1958)..... Anniston

S. W. Windham (1959)..... Dothan

W. D. Anderson (1960)..... Tuscaloosa

E. L. Strandell (1961)..... Brewton

SECRETARY-TREASURER

Douglas L. Cannon (1960)..... Montgomery

EXECUTIVE SECRETARY

W. A. Dozier, Jr..... Montgomery

THE STATE BOARD OF CENSORS

E. V. Caldwell, Chm. (1960)..... Huntsville

J. G. Daves (1960)..... Cullman

John L. Branch (1958)..... Montgomery

J. O. Finney (1958)..... Gadsden

E. G. Givhan, Jr. (1959)..... Birmingham

G. O. Segrest (1959)..... Mobile

John W. Simpson (1961)..... Birmingham

J. Paul Jones (1961)..... Camden

Robert Parker (1962)..... Montgomery

J. P. Collier (1962)..... Tuscaloosa

STATE HEALTH OFFICER

D. G. Gill (1962)..... Montgomery

DELEGATES AND ALTERNATES TO THE AMERICAN

MEDICAL ASSOCIATION

Delegate—J. Paul Jones..... Camden

Alternate—D. G. Gill..... Montgomery
(Term: January 1, 1956-December 31, 1957)

Delegate—E. Bryce Robinson..... Fairfield
Alternate—B. W. McNease..... Fayette

(Term: January 1, 1957-December 31, 1958)
Delegate—J. Paul Jones..... Camden

Alternate—D. G. Gill..... Montgomery
(Term: January 1, 1958-December 31, 1959)

STANDING COMMITTEES

COMMITTEE ON PUBLIC RELATIONS

Julius Michaelson, *Chairman*, Foley..... 1959

Haynes Byrne, Montgomery..... 1959

N. E. Cowart, Huntsville..... 1959

J. G. Daves, Cullman..... 1958

Amos Gipson, Gadsden..... 1958

H. M. Simpson, Jr., Florence..... 1958

J. O. Colley, Jr., Troy..... 1960

M. Vaun Adams, Mobile..... 1960

J. S. DuBois, Enterprise..... 1960

J. E. Moss, Mobile..... 1961

E. B. Glenn, Birmingham..... 1961

Sumner Davis, Talladega..... 1961

T. C. Donald, Anniston..... 1962

W. E. Doggett, Jr., Birmingham..... 1962

R. O. Rutland, Jr., Fayette..... 1962

(The President, President-Elect, Secretary, and State Health Officer are ex-officio members.)

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

W. B. Frommeyer, Jr., *Chairman*, Birmingham..... 1958

Garber Galbraith, Birmingham..... 1959

J. W. Donald, Mobile..... 1960

Luther L. Hill, Jr., Montgomery..... 1961

R. J. Grayson, Selma..... 1962

COMMITTEE ON MEDICAL CARE FOR INDUSTRIAL WORKERS

E. Bryce Robinson, *Chairman*, Fairfield..... 1960

H. E. Simon, Birmingham..... 1958

T. J. Payne, Jr., Jasper..... 1959

A. C. Jackson, Jasper..... 1961

J. M. Donald, Birmingham..... 1962

COMMITTEE ON INSURANCE

J. O. Morgan, *Chairman*, Gadsden..... 1962

Victor Hudson, Mobile..... 1958

B. N. Carraway, Birmingham..... 1959

H. J. Till, Montgomery..... 1960

J. H. Baumhauer, Mobile..... 1961

COMMITTEE ON FINANCE

Hugh Gray, *Chairman*, Anniston..... 1958

S. W. Windham, Dothan..... 1959

W. D. Anderson, Tuscaloosa..... 1960

E. L. Strandell, Brewton..... 1961

B. F. Thomas, Sr., Auburn..... 1958

W. L. Smith, Montgomery..... 1958

A. F. Wilkerson, Marion..... 1958

E. L. McCafferty, Jr., Mobile..... 1958

R. P. Stock, Childersburg..... 1958

D. E. Owensby, Woodland..... 1958

W. J. B. Owings, Brent..... 1958

D. J. O'Brien, Sheffield..... 1958

(The President, President-Elect, and Chairman of the Board are ex-officio members.)

COMMITTEE ON CONSTITUTION AND BY-LAWS

W. R. Carter, *Chairman*, Repton..... 1958

J. M. Weldon, Mobile..... 1959

W. S. Littlejohn, Birmingham..... 1960

E. G. Moore, Tallassee..... 1961

J. W. Davis, Jr., Montgomery 1962
(The Chairman of the Board and the Secretary
are ex-officio members.)

COMMITTEE ON INDIGENT CARE

J. Paul Jones, *Chairman*, Camden 1958
R. C. Berson, Birmingham 1959
D. G. Gill, Montgomery 1960
H. M. Gewin, Mobile 1961
A. E. Thomas, Montgomery 1962

COMMITTEE ON LEGISLATION

M. Vaun Adams, *Chairman*, Mobile 1958
Hugh Gray, Anniston 1958
S. W. Windham, Dothan 1959
J. H. Little, Mobile 1959
W. D. Anderson, Tuscaloosa 1960
Julius Michaelson, Foley 1960
E. L. Strandell, Brewton 1961
Paul Burleson, Birmingham 1961
W. A. Daniel, Jr., Montgomery 1962
Lucian Newman, Dadeville 1962

(The President, President-Elect, Secretary,
Executive Secretary, and State Health Officer are
ex-officio members.)

COMMITTEE ON RURAL HEALTH

Paul Nickerson, *Chairman*, Sylacauga 1958
Jack Kirschenfeld, Ft. Deposit 1959
Kendall Eppes, Eufaula 1960
W. C. Browne, Vincent 1961
F. S. Whitfield, Jr., Demopolis 1962

COMMITTEE ON EMERGENCY MEDICAL SERVICE

J. Mac Barnes, *Chairman*, Montgomery 1958
Carlton Winsor, Mobile 1959
A. I. Chenoweth, Birmingham 1960
F. W. Smith, Huntsville 1961
H. G. Herrod, Jr., Tuscaloosa 1962

COMMITTEE ON VETERANS AFFAIRS

J. P. Mudd, *Chairman*, Jackson 1958
O. Emfinger, Union Springs 1959
N. A. Wheeler, Jr., Lafayette 1960
L. L. Parker, Andalusia 1961
Dowling Petree, Ozark 1962

COMMITTEE ON MATERNAL AND CHILD HEALTH

Hughes Kennedy, Jr., *Chairman*, Birmingham 1958
N. R. Clarke, Jr., Mobile 1959
J. H. French, Montgomery 1960
T. B. Woods, Dothan 1961
Kermit Pitt, Decatur 1962

COMMITTEE ON CANCER CONTROL

W. N. Jones, *Chairman*, Birmingham 1961
A. E. Casey, Birmingham 1958
T. B. Hubbard, Jr., Montgomery 1959
John Day Peake, Mobile 1960
J. P. Chapman, Selma 1962

COMMITTEE ON MENTAL HYGIENE

Jack Jarvis, *Chairman*, Birmingham 1958
Frank A. Kay, Birmingham 1959
Dixon Meyers, Mobile 1960
T. D. Rivers, Montgomery 1961
J. S. Tarwater, Tuscaloosa 1962

COMMITTEE ON TUBERCULOSIS AND CHRONIC
PULMONARY DISEASES

R. K. Oliver, *Chairman*, Montgomery 1958
W. J. Tally, Gadsden 1959
Otis Jordan, Tuscaloosa 1960
A. A. Calix, Decatur 1961
A. J. Viehman, Birmingham 1962

SPECIAL COMMITTEES

AMERICAN MEDICAL EDUCATION FOUNDATION

H. G. Hodo, *Chairman*, Fayette 1962
T. S. Boozer, Montgomery 1958
Paul P. Salter, Jr., Birmingham 1959
H. B. Strickland, Jr., Hartford 1960
E. L. Gibson, Enterprise 1961

MEDICAL ADVISORY BOARD FOR CRIPPLED
CHILDREN AND ADULTS

S. E. Upchurch, Birmingham 1958
Garber Galbraith, Birmingham 1958
Paul S. Mertins, Montgomery 1958
J. G. Donald, Mobile 1959
W. J. Atkinson, Mobile 1959
Robert Parker, Montgomery 1959
J. S. Snow, Tuscaloosa 1960
F. A. Kay, Birmingham 1960
E. N. Kaiser, Montgomery 1960

BLUE CROSS—BLUE SHIELD

Robert H. Mason, Hamilton 1959
Gordon M. Hankins, Fairfield 1959
R. J. Guest, Jr., Ft. Payne 1960
H. S. Bartlett, Montgomery 1960
A. E. Casey, Birmingham 1961
J. G. Donald, Mobile 1961

A. M. A. PROGRAM EVALUATION

E. M. Moore, *Chairman*, Montgomery 1958
J. R. Benson, Wetumpka 1959
John S. Bobo, Gadsden 1960
M. Vaun Adams, Mobile 1961
Paul Everest, Montgomery 1962

REGISTRATION AT THE EIGHTY-NINTH ANNUAL SESSION

MOBILE, APRIL 18-20, 1957

LIFE COUNSELLORS

Anderson, T. J., Greensboro
Bedsole, J. G., Jackson
Brunson, E. T., Samson
Caldwell, E. V., Huntsville
Cannon, D. L., Montgomery
Carter, W. R., Repton

Chenault, F. L., Decatur
Hill, R. C., York
Hill, R. L., Winfield
Hodges, Rayford, Scottsboro
Martin, J. A., Montgomery

Oswalt, G. G., Mobile
Rucker, E. W., Birmingham
Salter, W. M., Anniston
Taylor, W. R., Town Creek
Weldon, J. M., Mobile

ACTIVE COUNSELLORS

Abbott, C. E., Tuscaloosa
Barnes, J. M., Montgomery
Baumhauer, J. H., Mobile
Branch, J. L., Montgomery
Carmichael, J. L., Birmingham
Chenault, J. M., Decatur
Clyde, W. A., Birmingham
Cocke, W. T., Demopolis
Collier, J. P., Tuscaloosa
Crawford, J. M., Arab
Daves, J. G., Cullman
Davis, J. W., Jr., Montgomery
Denison, G. A., Birmingham
Dodson, R. B., Cullman
Donald, D. C., Birmingham
Donald, J. M., Birmingham
Finney, J. O., Gadsden
Foshee, R. A., Alexander City
Gibson, E. L., Enterprise
Gill, D. G., Montgomery
Gipson, A. C., Gadsden
Givhan, E. G., Jr., Birmingham
Glenn, E. B., Birmingham
Godard, C. G., Fairhope

Golden, W. C., Clanton
Gray, H. E., Anniston
Grote, C. A., Huntsville
Guest, R. J., Jr., Ft. Payne
Hollis, M. C., Winfield
Isbell, A. L., Albertville
Jackson, A. C., Jasper
Johnson, G. T., Mobile
Jones, J. P., Camden
Kennedy, Hughes, Jr., Birmingham
Killingsworth, N. W., Brundidge
Lisenby, J. O., Atmore
Littlejohn, W. S., Birmingham
Lynch, M. H., Scottsboro
McNease, B. W., Fayette
Moore, E. G., Tallassee
Morgan, J. O., Gadsden
Morgan, J. R., Geneva
Moss, J. E., Mobile
Neal, R. D., Grove Hill
Newton, G. E., Prattville
Nickerson, Paul, Sylacauga
Owings, W. J. B., Brent

Parker, L. L., Andalusia
Parker, Robert, Montgomery
Partlow, R. C., Tuscaloosa
Ramey, D. R., Jr., Greensboro
Riggs, F. W., Montgomery
Roan, A. M., Decatur
Robinson, E. B., Fairfield
Segrest, G. O., Mobile
Shell, J. R., Abbeville
Sherrill, J. D., Birmingham
Simpson, J. W., Birmingham
Stabler, L. V., Greenville
Stallworth, W. A., Beatrice
Timberlake, Landon, Birmingham
Treherne, A. J., Atmore
Underwood, S. S., Birmingham
Watson, Jerre, Anniston
Whiteside, M. S., Cullman
Wilkerson, A. F., Marion
Williams, S. J., Livingston
Wilson, F. C., Birmingham
Wilson, W. E., Russellville
Woodruff, G. G., Anniston

DELEGATES

Autauga: R. K. Nichols, Prattville; Cecil Tew, Jr., Prattville
Baldwin: H. C. Jordan, Fairhope; J. Michaelson, Foley
Bibb: J. Ethel Montgomery, West Blocton
Bullock: O. Emfinger, Union Springs
Calhoun: T. C. Donald, Anniston; W. E. White, Anniston
Chambers: P. W. Austin, Langdale
Cherokee: E. H. Bradley, Centre
Chilton: J. H. Johnson, Clanton; C. O. Lawrence, Clanton
Choctaw: R. H. Allen, Butler
Clarke: W. F. deShazo, Jackson; J. P. Mudd, Jr., Jackson
Clay: C. P. Horne, Ashland
Coffee: J. E. Pittman, Enterprise; J. F. Stanley, Enterprise
Colbert: H. C. Johnson, Sheffield; J. A. Mitchell, Sheffield
Conecuh: C. E. Price, Evergreen
Covington: W. G. Cumbie, Andalusia; J. C. Hurst, Opp
Cullman: L. H. Clemmons, Cullman; G. T. Rowe, Hanceville
Dale: R. J. McLaughlin, Ozark; B. D. Petrey, Ozark
Dallas: R. J. Grayson, Selma
DeKalb: C. D. Killian, Ft. Payne; William Noble, Ft. Payne
Elmore: J. R. Benson, Wetumpka; J. E. Dunn, Wetumpka
Escambia: B. C. Maxwell, Atmore; E. L. Strandell, Brewton
Etowah: W. E. Frantz, Gadsden; J. T. Sheppard, Gadsden; B. J. Steinberg, Gadsden
Franklin: J. F. Stanley, Russellville

Hale: W. C. McDory, Jr., Greensboro
Henry: L. P. Shell, Abbeville
Houston: D. S. Tysinger, Jr., Dothan; S. W. Windham, Dothan
Jefferson: J. M. Barron, Birmingham; P. W. Burleson, Birmingham; B. M. Carraway, Birmingham; W. E. Coleman, Birmingham; L. M. Dawson, Birmingham; J. D. Elmore, Birmingham; J. G. Galbraith, Birmingham; Stanley Graham, Birmingham; W. L. Hawley, Birmingham; J. M. Humphries, Birmingham; Rhodes Johnston, Birmingham; W. N. Jones, Birmingham; W. E. Lawrence, Birmingham; J. E. Linn, Birmingham; J. H. Nelson, Birmingham; C. W. Neville, Birmingham; C. W. Phillips, Jr., Birmingham; J. K. Ward, Birmingham; C. L. Yelton, Fairfield
Lauderdale: M. C. Dunn, Florence; H. M. Simpson, Jr., Florence
Lawrence: C. G. Farish, Moulton
Lee: B. F. Thomas, Sr., Auburn
Limestone: J. S. Crutcher, Athens; A. D. Powers, Athens
Lowndes: J. A. Sherrod, Jr., Hayneville
Madison: A. L. Watson, Huntsville
Marion: E. W. Couch, Winfield; R. H. Mason, Hamilton
Mobile: F. T. England, Mobile; P. P. Gilchrist, Mobile; V. H. Hill, Mobile; C. A. Lightcap,

Mobile; J. H. Little, Mobile; S. S. Murphy, Mobile; W. L. Sellers, Jr., Mobile; H. N. Webster, Jr., Mobile
Monroe: B. L. Hanks, Frisco City; R. A. Smith, Jr., Monroeville
Montgomery: P. K. Burwell, Montgomery; H. C. Byrne, Montgomery; N. R. Cohen, Montgomery; J. H. French, Montgomery; W. L. Smith, Montgomery
Morgan: A. A. Calix, Decatur; L. C. Harris, Jr., Decatur
Picksens: R. K. Wilson, Aliceville
Pike: J. A. Brantley, Troy; T. D. Cowles, Troy
Randolph: W. D. Israel, Wedowee
Russell: D. T. W. Chi, Phenix City
Shelby: W. C. Browne, Vincent; Jean Clark, Vincent
Sumter: D. C. Byrne, Bellamy; H. C. Hunt, Livingston
Talladega: J. D. Rayfield, Talladega; R. P. Stock, Childersburg
Tallapoosa: J. E. Cameron, Alexander City
Tuscaloosa: Luther Davis, Jr., Tuscaloosa; J. H. Goode, Tuscaloosa; J. E. Hanby, Tuscaloosa
Walker: L. M. Walker, Jasper; D. J. Williams, Jr., Jasper
Washington: N. E. Hyder, Jr. Chatom
Wilcox: E. L. McIntosh, Camden; J. D. Nettles, Arlington

MEMBERS

A

Abell, R. E., Jr., Mobile
 Adams, M. V., Mobile
 Agee, E. B., Jr., Mobile
 Allen, H. V., Mobile
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SUMMARY OF ANNUAL ATTENDANCE

Year	Life Counsellors	Active Counsellors	Delegates	Members	Auxiliary, Others	Total	Place
1926	33	74	105	194	131	537	Mobile
1927	36	85	104	252	87	564	Montgomery
1928	33	77	108	507	106	831	Birmingham
1929	19	60	102	176	109	466	Mobile
1930	32	83	106	286	102	609	Montgomery
1931	26	80	116	410	158	790	Birmingham
1932	19	60	101	158	133	471	Mobile
1933	21	74	103	264	85	547	Montgomery
1934	26	75	97	404	53	655	Birmingham
1935	15	59	91	180	83	428	Mobile
1936	23	79	95	265	68	530	Montgomery
1937	25	80	96	396	81	678	Birmingham
1938	18	65	78	157	63	381	Mobile
1939	29	79	96	326	84	614	Montgomery
1940	29	77	105	401	229	841	Birmingham
1941	29	66	86	211	91	483	Mobile

Year	Life Counsellors	Active Counsellors	Delegates	Members	Auxiliary, Others	Total	Place
1942	33	75	105	249	82	544	Montgomery
1943	31	71	83	321	127	633	Birmingham
1944	33	72	92	214	110	521	Montgomery
1945	Meeting Cancelled						
1946	38	81	87	330	127	663	Birmingham
1947	34	76	91	333	124	658	Birmingham
1948	24	64	87	239	127	541	Mobile
1949	31	84	93	288	106	602	Montgomery
1950	26	85	91	391	118	711	Birmingham
1951	21	75	84	281	115	576	Mobile
1952	27	81	90	314	141	653	Montgomery
1953	24	81	91	403	129	728	Birmingham
1954	15	62	83	267	139	566	Mobile
1955	30	73	85	301	290	779	Montgomery
1956	26	77	91	421	171	786	Birmingham
1957	16	70	108	281	210	685	Mobile

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THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Volume 26

July 1956-June 1957

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